Issue 145 • 17th August 1991 • 88p

NEW COMPUTER EXPRESS

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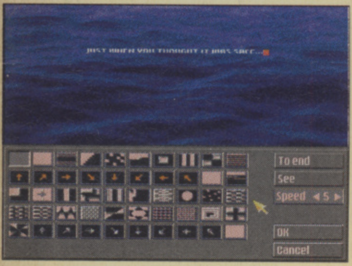
see pages 16-25, 31-33, 44-45

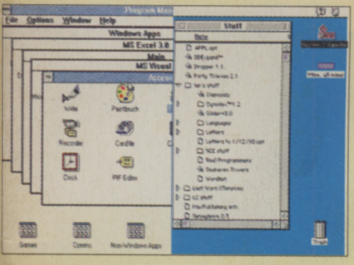
FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE

AMIGA



LA SCALA
The Amiga best seller has been upgraded

ATARI



THE NEXT ST
Will it be the STPC or the STMAC? Find out...

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NEBULUS 2
Is this the worst sequel ever made?

YOU CAN'T GO TO THE SHOW!

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Computer crime: is it on the increase? Find out on pages 54 & 55

The Philips PCL203. Are you paying through the nose for a name? – p53

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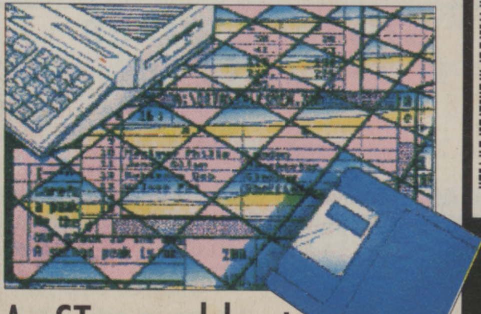

An ST spreadsheet for under £30 – p49

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Create your accounts in a new dimension

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• The memory of the Philip's notebookcan be expanded to 8 Mb

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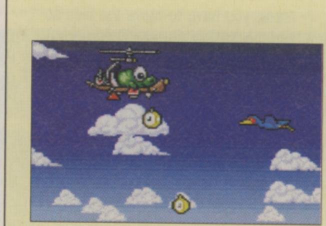
• The Hyperface 386SX – doubles processing speeds



• Nebulus 2, does it come up with the laughs?

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Could you be a winner?

Turn to page 58 to see if you've got the goodies!

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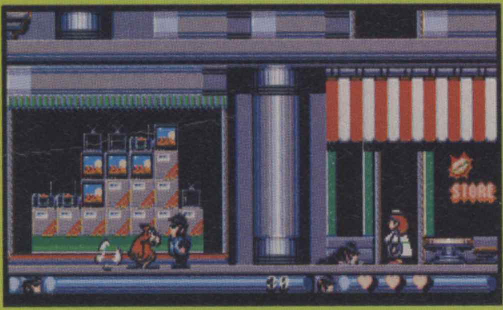


• Jake and Elroy have always got into trouble in the past, and now they can do so on your computer with *The Blues Brothers* from Titus

It's a beautiful game Bob!

Rock till you drop in *The Blues Brothers*, the computer game.

In the game you have to set up the perfect conditions for the Blues Brothers' concert. The only thing is, you have to get Jake and Elroy there.

The Blues Brothers game features five scrolling levels of chaos and confusion in such varied surroundings as department stores, prison cells and sewers.

The music was one of the highlights of the movie, and the game too features a computerised rendition of the original Blues Brothers soundtrack.

Other features include over 200 different screens of graphics and multi-directional scrolling.

The game which is as yet unpriced will be out for the ST, Amiga and PC later this year. ■

Europe's biggest computer-related expo runs

DOORS SHUT

News broke late last week concerning the forthcoming European Computer Entertainment Show (ECES) which was to be held at Earl's Court 2 between 6 and 8 September.

The show, which last year attracted thousands of members of the public, and was heralded as a major success, is this year to be a trade only event.

CHANGE OF PLAN

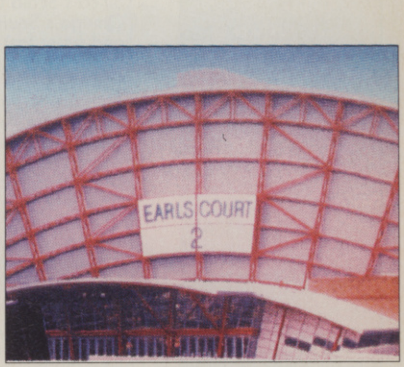
The previous plan was to have two halls at the venue. One was to be trade only, while the doors of the other were to be opened to members of the general public.

Exhibitors expected to attend included Commodore, Atari, Virgin Games, Ocean, US Gold, Domark and Virgin Mastertronic (soon to become Sega Europe) amongst many others both great and small. However, it now appears that the consumer side of the venture has now been abandoned.

We attempted to contact a representative of EMAP exhibitions in order to discover exactly why the public side of the show was to be ditched. But at the time of going to press we had still not received any response.

MIXED RECEPTION

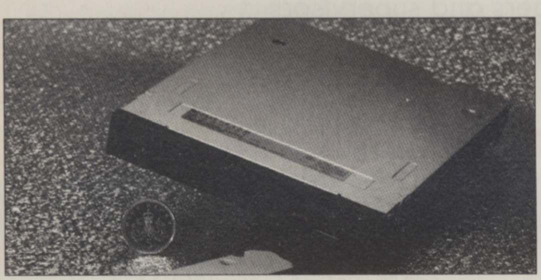
The reaction from the computer industry, however, has been mixed with some companies welcoming a trade only exhibition, which others feel saddened by the situation.



• Stay away from the European Computer Entertainment Show in September, at Earl's Court 2. Unlike last year's show when it was open to the public, this year's exhibition is strictly for trade only

The organisers are attempting to warn members of the public away from the show with the aid of radio advertising in the London area. However, it is still expected that many members of the public will show up as the pre-booked tickets were available. ■

Advent of the slim drive



• Could a floppy drive be any thinner than this? The new, svelte MF355E from Mitsubishi is designed for notebook and laptop PCs

Computers look set to become even smaller thanks to a new Mitsubishi-designed floppy drive which is barely larger than the disks you put in it.

The MF355E is a 1.44Mb 3.5-inch drive designed for use with notebook and laptop PCs. It is just 14.8mm high, which is less than the diameter of a 5p coin, but it conforms to the width standard of notebook computers (96mm) and weighs 195g.

Not yet commercially available, the MF355E will, according to the company, cost no more than a standard 3.5-inch disk drive. ■

Trading places

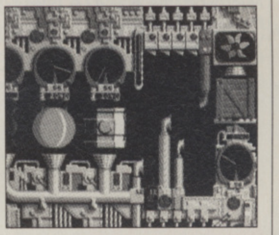
***Traders*, from Linel is a trading game which involves the usual buying and selling of commodities in order to make a profit. While doing this you can play other sub-games, including playing roulette and battling robots.**

Four players always play the game, whether they are computer controlled or, with the addition of a four player joystick interface, human.

Games players like being puzzled it seems, and Linel is counting on this for its release of *Tilt*, its new puzzle game.

While a metal ball rolls around a maze, you have to move the tiles so that the ball crosses the finishing line within the time limit. Numerous obstacles get in the way of the ball's progress, including beer mugs and puddles that slow it down.

Both games are available now for the Amiga, ST and PC. For more information, call Linel on 010-41-752-8368. ■

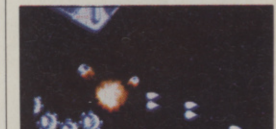


• Live the life of Gordon Gekko by wheeling and dealing on *Traders*

EXPRESS...

Maurice Hamlin, the MD of Lancashire-based software house, Hamlin International was arrested at his home in Chorley on 30 July and charged with drug-trafficking offences relating to £5 million worth of cocaine.

...SNIPPET



• End of level guardians appear in *Cardiaxx*, which is new on the shoot-'em-up front

Fast scroller

Adding its name to the streams of shoot-'em-ups battling to get into your disk drive is Electronic Zoo's *Cardiaxx*

It claims to be the fastest scrolling game to date (don't they all?) and features five different levels, bolt-on weapons, a special two player mode and huge end of level guardians, as shown above.

Cardiaxx will be released on 30 September for the Amiga, ST and PC, priced at £25.99. ■

Printer price slashed

NEC has reduced the price of its 24-pin wide carriage P70 printer by £100 to £699.

The P70 can print over 136 columns, and up to A3 paper size. Speeds range from 100 character per second (cps) for letter quality to 300 cps for draft quality.

The printer comes with 10 resident fonts and Windows 3.0 driver software.

If you want to get hold of one at this amazingly low price, contact NEC on 081-993 8111. ■

Bargains for the ST

Frontier Software has reduced the price of most of its Atari ST-related products, some by up to 45 per cent.

These include the Xtra-RAM ST and Xtra-RAM STE memory upgrades and the Forget-Me-Clock II clock cartridge.

The two different RAM cards are for the ST and STE series of machines, respectively, and can be installed by the user in about an hour. Some soldering may be needed for owners of newer STs, however.

The unpopulated Xtra-RAM ST card has been reduced from £54.99 to £29.99, while the 0.5Mb version is now £59.99 instead of £69.99. The 2Mb version is now reduced from £99.99 to £159.99.

Forget-Me-Clock II is a cartridge that plugs into an ST or STE and automatically sets the system and keyboard clocks as soon as the computer is turned on. Usually both clocks have to be set manually.

The cartridge also has a pass through port so that other cartridges can be plugged in 'on top' of it; other similar cartridges tie up the port completely, the company claims.

The Forget-Me-Clock II is now priced at £24.99 instead of £25.53.

For further information, call Frontier Software on 0423 567140 or 0423 530577. ■

into trouble as show goes trade only

ON PUBLIC

WHAT THE EXHIBITORS THINK ...

News of the change in aspect of the European Computer Entertainment Show came as a shock to many companies who were to participate.

We spoke to a number of major companies to assess their reaction.

Andrew Wright of Virgin Games: "I'm really quite upset on behalf of the industry. We didn't want to take two stands, one in the trade area and one for the public, and I think that this was a common attitude. So, at the moment everything is on 48-hour hold awaiting a decision as to whether we will attend".

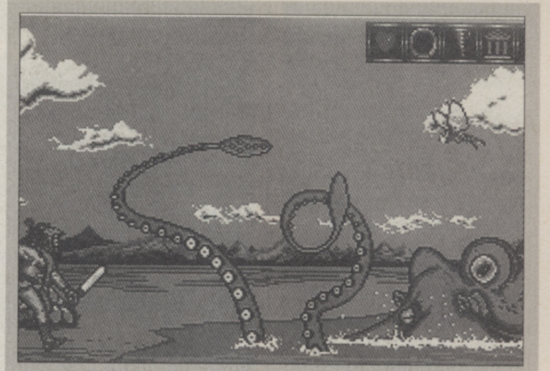
Andrew Chorzelski of US Gold: "We are very saddened by the decision. It doesn't change our stance. We wanted a trade only show but at this late stage we will have to consider our position. We will be showing our wares at the Gloucester hotel rather than Earl's Court."

Peter Walker of Atari: "We are disappointed that the show is not to go ahead. It actually makes us look towards the Computer Shopper show. We think it's important to have a show for the consumer, so this decision saddens us. But the timing of the show is critical, September is too far away from Christmas for it to be effective".

Kelly Sumner of Commodore: "It is very unfortunate that some of our associates and competitors don't want to show their support for a show which the industry needs. We've even started building our stand. We're a little bit aggrieved".

Clare Edgely of Domark: "We were only going to the trade side anyway. Although putting together a big stand with loads of arcade games would be nice for the public, it really won't stay with them long enough for the impact to carry over to Christmas".

Nick Alexander of Virgin Mastertronic (soon to be Sega Europe): "A consumer show is largely an irrelevance to us. We have not been too sad about the situation. The consumer show is a bit of an anachronism'.



• ***Son of Zeus* features over 40 different fantasy monsters, each with its own sound effect, and the gods comment on the action with sampled speech which guides you on your way**

This will grab you!

Heracles, hero of the *Son of Zeus*, has to free the gods trapped by the evil Kronos on Mount Olympus. He must find 12 pieces of the special stone that holds the key to the god's power, giving them the strength to destroy Kronos.

As Heracles, you view the land of Greece in first-person perspective, and will be able to battle the monsters that will be encountered with a variety of weapons and different physical manoeuvres.

Son of Zeus will be available from Electronic Zoo on 30 October for the ST and Amiga.

Electronic Zoo will also release *The Magic Garden*, a cute arcade adventure, on 30 September, while *Under Pressure*, a scrolling arcade action game, will be available on 30 November. ■

• ***PC Format* will be launched on 26 September**

Get ready for PC Format

If you've got a PC compatible or are interested in finding out what they are capable of then you should check out Future Publishing's new magazine *PC Format*, 'the modern guide to personal leisure computing', which hits the newsstands on 26 September.

PC Format is aimed at all aspects of leisure and entertainment computing for the PC, including graphics, music, games, shareware and much more.

Every issue comes cover mounted with either a single 3.5-inch disk or two 5.25-inch disks packed with 720K of game demos and shareware utilities.

The 3.5-inch version costs £2.95 and the 5.25-inch, £3.25.

In the first issue of *PC Format* you will find out everything you need to know about soundcards and why you should want one, and you'll be able to get to grips with playable demos of *MiG 29*, *Super Fulcrum* and *Speedball 2*.

You'll also find our very own PC columnist, Paul Rigby, offering the benefits of his considerable experience.

The launch issue is out on 26 September and subsequent issues will be in all good newsagents on the fourth Thursday of every month. ■

The great escape?

Two new versions of the *Mass Breakout* comms software for the PC are to be launched.

PC Communications is releasing *Mass Breakout 2* and *Mass Breakout Network*. The former enables simultaneous linking of one IBM PS/2 compatible PC with up to four host mainframes or PCs via modem.

Using an on-line windowing system, the user can display all four conferences at the same time, or can 'hotkey' between the four.

The program also runs in the background and can be invoked when required. Included in the package is the Z-Modem file transfer protocol, and a fully implemented VT220 terminal emulation.

Mass Breakout Network is, as its name suggests, a LAN (Local Area Network)-based system. Its aim is to do away with the need for shared modems on LANs. Price for this package is on an on-sight basis.

Mass Breakout 2 will cost you £250. For more information call PC Communications on 0628 851111. ■

Supermouse

Logitech has developed a mouse especially for working with three dimensional graphics that can also be used to input voice commands.

The mouse works by receiving ultrasonic signals from a small triangular unit plugged into the computer. This means that you can pick up the mouse as well as moving it around on the flat plane of a table top. It will be ideal for Computer Aided Design.

It also has press-to-speak facilities for entering vocal commands.

The 3-D mouse will sell for around $1,000, which Logitech reckons is less than a third of similar devices.

Production models should be available early in 1992. ■

Empire blitz

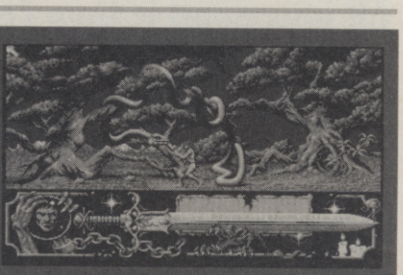
Empire is blitzing with five new games: *Death Bringer* is a 30-level scrolling beat-'em-up which features over 600 graphic screens and 36 levels of 'perfect parallax' – the game has parallax effects on every raster line. Karn, the hero of the game, is animated in 64 frames.

In *Volfied*, the conversion of the *Taito* coin-op, you have to battle through 16 levels of aliens using your lasers and megablasters, while dodging their formidable fire power.

Space 1889 is the computer version of the role playing game. As well as exploring planets, players can also look around a number of cities on Earth, including London and New York. In their travels players will encounter over 500 different characters which can be either traded with or fought, depending on what's appropriate.

Eye of the Storm is set on Jupiter. It features solid 3-D graphics with light source illumination and Gourand shading, to make objects appear smoother. There are a number of missions to complete, against the hostile intentions of traders, mercenaries and other rogue characters.

Twilight 2000 is set in the aftermath of Word War III. You and your squadron have to deal with the political and territorial problems created by the war, by setting up alliances and military blocs. ■



• **Amiga owners can soon become Khan the Barbarian and battle the evil wizards in *Death Bringer***

EXPRESS...

Sixty three per cent of Tottenham Hotspur's shareholders have accepted the 75p a share offer from Terry Venables and Amstrad chairman Alan Sugar.

...SNIPPET

NIBBLES

Royal approval

Berkshire-based Software Products International has been honoured by King Juan Carlos of Spain at a ceremony at the Palace of the Zarzuela in Madrid. The honour was in recognition of SPI's position as the leading business software company in Spain.

Managing director John Browne presented the King with a copy of the company's multi-function software *Open Access III* which was voted 'Product of the Year' by a leading Spanish PC magazine. Apparently, Juan Carlos immediately filled in his registration form!

Look, no leads!

Relay/3270 VTAM 4.1 is an enhanced software-only package from ComWare International which enables PC users to use VTAM-based mainframe applications without resorting to leads, emulation boards or other hardware. It provides full-screen emulation of IBM 3277, 3278 and 3279 model 5A mainframe terminals.

Prices are £8,750 for the VM VTAM version and £10,313 for the MVS VTAM version.

NeXT Text

Adobe has announced the launch of its *Illustrator* colour illustration software for the NeXT computer. It includes features only available on the NeXT version – a preview function and the facility to use colour or greyscale TIFF images as templates for autotracing. It costs £550.

Adobe has also released *TouchType* for the NeXT. This is a £189 text manipulation program which can perform such tasks as precise kerning, scaling, rotation and case conversion. You can contact them on 0706 831831.

New fonts

Four new Adobe Type Set packages designed specifically for business uses will be available from 1 September. Each set contains 8 to 10 Adobe type 1 fonts, Adobe *Type Manager* and a 32 page guide on how to make the most of your fonts. Available for Apple Macintosh computers and PCs running Microsoft Windows, the Adobe Type Set For Business packages will cost between £89 and £149.

Tense, nervous headache?

Brain machines are devices for relieving stress and inducing a state of tranquility by subjecting the user to all encompassing audio-visual experience.

At £49.99, the Innervision PR2 is a new low-cost brain machine offering facilities usually only found on machines costing around £800, according to UK distributor the London Neuro-Centre. It features 25 pre-set programs, but you can also devise up to 10 of your own customised light and sound shows.

Contact The London Neuro-Centre, 23 Camden Lock, London NW1 8AF. ■

• Not something to while away the time under the sun lamp, but a hi-tech solution to stress

Rugged cuts from GRiD

GRiD Systems, reknowned for producing rugged hard-wearing computers, is cutting prices across its range by up 30 per cent.

The reductions affect the company's laptop, notebook and desktop computers, hard drives, RAM kits, CPUs, coprocessors and monitors.

The GRiD 1450 laptop with 40Mb hard drive, for example, is down by $1,300 to $3,995 while the 1720 Notebook with 20Mb hard drive has been reduced from $3,495 to $2,895. RAM kits are all down by 25 per cent.

For further details contact GRiD on 081-897 6565. ■

Established software boss warns small games publishers:

"MERGE OR FACE FINANCIAL RUIN"

Audiogenic's managing director Peter Calver has warned other small publishing companies that they must look for mergers of face financial collapse within the next year.

This follows rumours in the computer industry that Audiogenic, the company responsible for such games as *Exile* and *Graham Gooch's World Class Cricket*, is running into financial troubles,

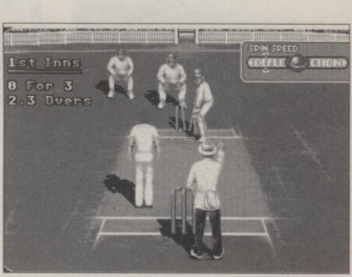
Calver, whose company has advertised in the trade press calling for merger or consortium proposals, reckons small companies cannot survive the current impoverished state of the games industry.

"The problem is that there are too many small companies releasing too many mediocre products," Calver told *Express*. "It comes down to who's marketing the products best as opposed to who's making the best products."

He believes that mergers will allow companies like Audiogenic to concentrate on producing the games, allowing someone else to handle the marketing. He also believes that a consortium of samll companies with one shared marketing division is a possible answer.

"I think that many other companies which have been around for a while will be thinking along the same lines." said Calver.

The Audiogenic move mirrors that of Hewson, now 21st Century Entertainments, which advertised in a national Sunday newpaper for partners in a joint venture. It was shortly after this advert that Hewson ceased trading. Audiogenic is hoping to avoid the same fate if its proposed plans come to fruition. ■



• Audiogenic believes it needs to merge if it is to carry on producing games like *Graham Gooch's World Class Cricket*

All you need is love (and bananas)

***Top Banana* is an environmentally aware Archimedes game from new publishing house, Hex.**

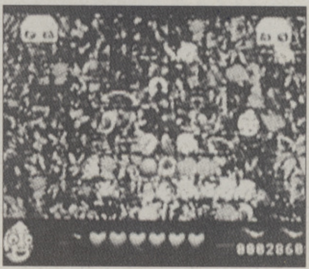
It features sprites sampled from television and video – the company believes this is the first time this technique has been used. Also included is three-way parallax scrolling, real time sampled music and customisation facilities to enable players to create their own sub-games by altering sprites. There's even a free T-shirt thrown in.

The game itself is an ecologically-aware outing. You are armed with just one powerful weapon, love. With this you have to save the world from the consequences of pollution.

You have to neutralise acid rain, stop floods and liberate the hoards of fruit which have been stacked up by the evil corporations. There are four 'worlds' to be saved.

The Hex crew is also working on a new game which makes use of artificial intelligence and neural networking. According to Robert Pepperell of the company, "It will change the way that people design games".

The price for *Top Banana* is £25.99. It will be released later this month, and both ST and Amiga versions are also in the planning stages. ■



• In*Top Banana* you can save the world with your powerful weapon – love!

SHOOT FROM THE LIP

"We still fundamentally believe that a consumer show is needed."

Neil Wood, EMAP's exhibitions director talking about plans for the CES, just days before the announcement was made that it would be a trade only show.

"So soon after the liberation of many countries throughout Eastern Europe, there is one type of European citizen who is far from free – he is your joystick."

Spectravideo press release for the company's new wire-free infra-red joystick, the Freedom Stick.

"The Gravis speaks a word and the word is quality...it sticks to the table top like electrons to the nucleus of an inert element."

Yet another Spectravideo press release for a joystick which does not, in fact, talk, and neither does it cause a nuclear reaction if you pull it off your table top. What are these people on? ■

Word from Tokyo – new Mac portable for under $2,000

SONY TO BUILD MAC NOTEBOOK

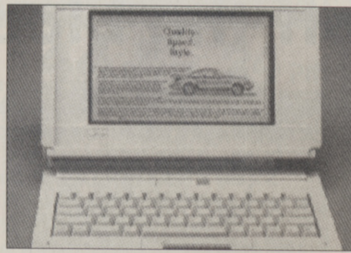
Apple Computer has once again become embroiled in a confusing situation regarding new launches.

Sony is to manufacture Apple's forthcoming Macintosh notebook, according to Japan's leading financial newspaper the *Nikkei*.

WHAT AGREEMENT?

It appears that a Sony spokesman confirmed that the huge Japanese electronics company will be manufacturing the notebook in the very near future. Apple has denied that any such deal has been struck.

The *Nikkei* report claims that the notebook will weigh between four and seven pounds and will cost around $1,850. Sony will produce the machine as an OEM (original equipment manufacturer) and it will be sold solely under the Apple brand name. The machine is expected to go into production before the end of this year.



• **Confusion reigns over the Mac notebook – has Sony got a deal to manufacture it or not?**

Sony already has close links with Apple, providing various parts for the American company, including floppy disk drives.

Sony also has the necessary production facilities to manufacturer small computers, so adapting to produce the new Macintosh notebook would be a fairly simple step.

At the moment the Outbound notebook, a portable which can be used as a standalone device and can then 'dock' with desktop Macs, is the only such machine to be recognised by Apple.

REALLY CRUCIAL

The Sony statement, which has still not been confirmed as coming from an official, follows another embarrasment for Apple, as one of its own executives has been reported as saying that IBM was crucial to the future of Apple.

In reply to a question posed about the relationship between the two companies, and specifically what would happen if the recent joint venture was to fail, Ian Diery, Apple's Pacific vice president said: "I wouldn't like to think". ■

Visual imagery

Golden Image has launched a revamped version of its hand scanner for the Atari ST and Amiga.

The Golden Image MARK II hand scanner comes with upgraded versions of *Touch-Up*, the accompanying software. The Amiga version now features a 'sketch' tool and a new scanning utility which enables you to use the scanner while you are still in another program.

Touch Up for the Atari now includes a 'colours as grey' feature. Grey scales are better than dithered greys, which use combinations of black dots to produce the impression of grey, as they do not distort in desktop publishing programs.

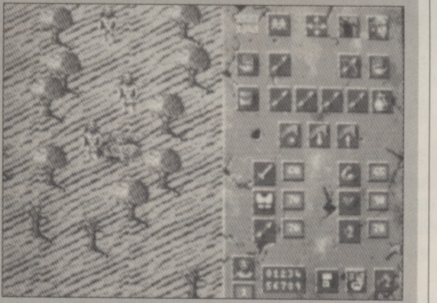
The MARK II Hand Scanners are available directly from Golden Image next month. Software upgrades for existing users are £15, while new users will have to pay in the region of £165. Telephone: 081-365 1102. ■.

New dimension to role playing

***Siegemaster* offers fantasy role-playing enthusiasts the chance to pit their wits against goblins, trolls, elves and other assorted baddies all in glorious 3-D isometric graphics.**

The game, from Vulture Publishing, involves you leading a party of up to 10 warriors to complete 100 tasks and ultimately overthrow your enemies' evil lord. This includes laying siege to 10 castles.

***Siegemaster* will be available for the ST and Amiga at £25.99 from late September.** ■



• **Animated 3-D graphics come to fantasy role-playing in *Siegemaster***

AST considers Emerald Isle

AST Research is set to announce details of a new European plant to supply the company's PCs to the whole of Europe.

At the moment Ireland looks the likeliest location as it has, "excellent facilities as well as a good supply of experienced staff," says Willson Hau, the company's marketing manager.

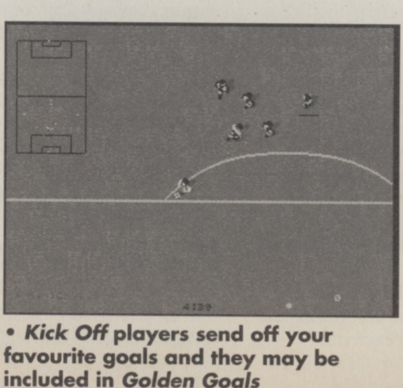
AST Research already has manufacturing facilities in California, Hong Kong and Taiwan and this latest news demonstrates its determination to establish a sound user base in Europe. ■

Relive those golden moments...

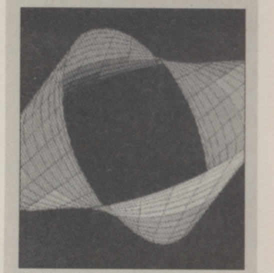
With the increasing popularity of such videos as *25 Years of Match of the Day* and *101 Greatest Goals*, it was inevitable that someone would soon come up with a computer version.

Golden Goals is to be a series of Public Domain disks containing the best, most exciting and funniest goals scored on *Kick Off 2*. The brainchild of Derek Doran, *Golden Goals* will rely on *Kick Off* players sending in their favourites goals for possible inclusion on the disks. Derek intends to have the first disks available by mid-October.

Derek has big plans for the future of the series, including celebrity *Golden Disks*. Should any Public Domain libraries would like to stock the disks, or if you want to send in some of your own favourite goals, you should contact Derek Doran at 3 Glenaulin Park, Chapelizod, Dublin 20, Eire. ■



• ***Kick Off* players send off your favourite goals and they may be included in *Golden Goals***



• **Do your accounts in 3-D with the new version of *Maple* which has many new functions and full colour 3-D graphics**

Simple algebra

Design engineers can be saved the drudgery of having to work out loads of complicated algebraic calculations thanks to the latest upgrade of *Maple* from Waterloo Maple Software.

Version 5.0 features many new functions, including full colour 3-D graphics and a new, easier-to-use graphical user interface (GUI).

According to the company you can now make the program perform any of over 2,000 general purpose and specialised mathematical functions using simple commands in a fully interactive environment.

***Maple* is PC compatible. Prices vary according to platform, with the 386 version costing £517.**

Pulling faces

Matsushita has developed a computer system that could win first prize in a gurning contest.

The PC-based face pulling system produces 3-D graphics of the human face which can be manipulated in a wide variety of ways. For example, it could age the face of a baby to that of a 70-year-old man, or predict the appearance of an unborn child by merging the faces of its parents.

More serious uses would be producing identikit pictures for the police or in pathology.

The current system is a prototype, but Matsushita reckons that the final model will be relatively low cost as it is based on an ordinary PC. ■

EXPRESS...

NeXT Computers has announced an 86 per cent increase in profits for the second quarter of 1991.

...SNIPPET

TOMORROW'S CUTTING EDGE

What's the next step in the evolution of computing? Find out here, right now, on this page...

Faster chip off the block

A chip with 10 times the processing power of most commercially available processors is being developed in Northern Ireland.

The digital signal processing (DSP) chip is capable of performing 250 calculations per second and comes courtesy of the Industrial Development Board of Northern Ireland.

Scientists at the IDB are claiming that the new technology enables them to produce circuits which can achieve up to 100 million operations per second.

Uses for the chip, which is a complementary metal oxide semiconductor (CMOS) Infinite Impulse Response (IIR) filter include applications in high definition television, aerospace and radar amongst others.

Its ability to make use of digital rather than analogue techniques for filtering apparently make it more capable of handling high frequencies than standard processors.

The basis of the chip's fantastic ability rests on a new technique for recursive calculations. This is a system whereby the result of one calculation is required to continue with the next.

Scientists in Belfast made a leap of imagination which led them to the conclusion that the whole result of a calculation was not required for this. Interim results could be passed on and used in subsequent additions, multiplications and subtractions. The partial results are manipulated using the 'redundant number system'.

The Belfast crew have been equally as fast off the mark as their new invention. The scientists have already formed a company, called Integrated Silicon Systems Ltd, and it will be marketing the chips as soon as the first set is off the production line and out of the factory. ■

• Virtual Reality doesn't have to be all space suits and gaunlets...

Comfy VR

Australia is not famous for the development of virtual reality, however, one man is seeking to change this.

David Nebe has come up a "new form of VR". Nebes plans to do away with the heavy suits and gauntlets normally associated with Cyberspace. His idea is to use transponders attached to the body, relaying signals to and from a central processor.

According to Nebe, this is a "more comfortable" way of achieving a computer-based Nirvana. Also, using transponders which do not have to cope with the translation of movement from body, via cloth, to the processor, eases the work of the main computer.

Transponders also cut down on cabling which, in the form of fibre optics, can interfere with movement and lead to a less than totally virtual experience.

To market this new idea Nebes has set up a company called Alternative Computer Systems (ACS) and hopes to take on the rest of the world, showing that the antipodes is as much on the cutting edge as the Orient and occident. ■

• Would you like your TV to set the video itself, record the programs you wanted and also edit out the adverts?

TV Times?

One of IBM's many vice presidents has looked into the future and has seen "personalised information".

Michael Braun would like to see intelligent computers which can monitor and relay information from a personally selected menu to the user.

One vision is for smart TVs and videos which scour the world's airwaves for programs which are of interest to the user. The system will be able to record, and possibly in the future even edit such broadcasts. Once the data has been collated, ideally it should be presented in the form if interactive multimedia. ■

E-by mail

A system called Directory Synchronization (sic) has been developed in the United States which enables E-mail users on Enterprise networks to communicate directly with individuals rather than anonymous nodes.

When changes are made to local directories they are automatically logged and sent to the linked systems thus allowing a more direct and immediate communication over local systems. ■

Like, yeah dude!

Computers and the gentle science of aesthetics are not normally associated items, after all a grey box is a grey box is a grey box, isn't it? However, a magazine called *Verbum* seeks to change this view.

Subtitled *The Journal of Personal Computer Aesthetics*, the mag comes in the form of a CD-ROM and is packed with animated images, interactive multimedia and even interactive features.

In order to access the wonderous delights of the magazine you will need the following:

- A healthy bank account – the first two CD magazines will cost you $50 plus post and packaging from the United States.
- A Macintosh SE30 or upwards with 5Mb RAM.
- An 8-bit colour monitor
- And, of course, a CD-ROM drive

For more information, or to place an order, write to Verbum, PO Box 12564, San Diego, California, USA. ■

Smart money

The Soviet Union is to have its first ever automatic cash dispensers.

The Soviet magic money machines will be more advanced than their western counterparts because they will make use of smart cards.

These cards can hold details of banking transactions, and other data in RAM. They will also hold details of the user's fingerprints. The initial shipment is of 2,000 cards. ■

We are the holograms

Time Traveller is a new game which aims to take arcades into the 21st Century. Big deal! you say, that's what they claimed for *Dragon's Lair* and *Space Ace* .

Well you would be wrong, *Time Traveller* actually uses a different technology to achieve its effects. It makes use of holograms.

Developed by Sega of Japan, the game is already breaking sales records but is let down by the difficulty of its gameplay. Instead of using the conventional arcade game architecture of upright box or sit-down glass table, the game is mounted in a white fibre-glass box which stands at about waist height. The player looks down into the system, and manipulates the game by use of three controls which are stationed at the top of the box. The player sees a black aperture into which the holographs are projected.

The aperture itself is lined with block shapes which are back-lit. According to reports from people who have played the new machine at the World Electronic Entertainment Centre in Marina Del Ray, California, the holograms look real, if a little out of focus.

The game play features a *Back to the Future*, or even *Bill and Ted* like theme. The player finds him or herself in the Wild West and needing to get home. Rather than any brain-teasingly complex puzzle solving, the game features a great deal of shooting-'em-up, down and sideways.

The realism of all this violence, the kills are repeated, has already led some observers to question whether or not such as game should be allowed in public.

It has also been questioned as to whether the game is too difficult. Even though a small training segment is available, featuring a young blonde woman, surviving the constant death dealing is far from easy - even if the third controlling button can be used to turn back time.

Sega has not yet announced when the game will be on show in Europe. One final fact of historical interest is that the person responsible for *Time Traveller* also designed *Dragon's Lair*. And for the record, his name is Rick Dyer. ■

• The brains behind *Space Ace* have been creating *Time Traveller* which is not only a new game, but also introduces a revolutionary arcade machine

CITIZEN PRINTERS

Silica presents some great offers on the award winning range of high quality dot matrix printers from Citizen. Each Citizen printer is built in the UK to exacting standards, ensuring superb reliability and a very high quality of output. Our confidence in the quality of Citizen printers is such that we are pleased to offer a unique two year guarantee with every printer. Plus, if you purchase your Citizen printer from us, we will give you a Silica Printer Starter Kit (worth £29.95), *FREE OF CHARGE!*

FREE DELIVERY
Next Day - Anywhere in the UK mainland

FREE STARTER KIT
Worth £29.95 - With every Citizen printer from Silica.

FREE COLOUR KIT
Worth £39.95 - With Swift 9 and Swift 24 printers.

2 YEAR WARRANTY
Silica offer a 2 year warranty (including the printer head) with every Citizen printer purchased from Silica.

WINDOWS 3.0
Free Windows 3.0 driver - In the Silica Starter Kit.

FREE HELPLINE
Technical support helpline open during office hours.

MADE IN THE UK
Citizen printers are manufactured to high standards.

144 CPS DRAFT 9 PIN

CITIZEN 120D+

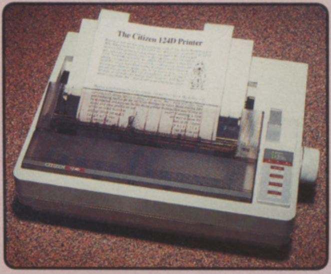
The Citizen 120D+ is one of the UK's best selling printers. It has a stylish appearance and excellent features and performance for such an inexpensive printer. The 120D+ is available with either a serial or parallel interface and is an ideal first printer.

- *9-pin Printhead*
- *Print Speed 144cps Draft*
- *30cps NLQ*
- *Epson & IBM Graphics Emulation*
- *Pull Tractor & Bottom Feed*
- *Superior Graphics - 240×216dpi*
- *FREE Starter Kit*

RRP	£233.83
STARTER KIT	£29.95
TOTAL RRP:	£263.78
SAVING:	£112.20
SILICA PRICE:	£151.58

£129
+VAT = £151.58

144 CPS DRAFT 24 PIN



CITIZEN 124D

The award winning Citizen 124D brings high quality 24-pin dot matrix printing within every computer users reach. It is the ideal choice where high quality printing is required at a budget price.

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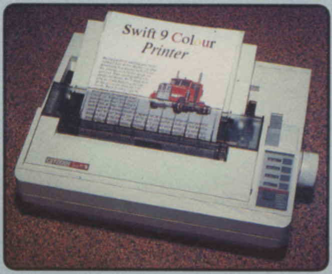
- *Print Speed 144cps Draft*
- *2 LQ Fonts (48cps)*
- *8K Buffer*
- *Epson, IBM & NEC P6+ Emulation*
- *Advanced Paper Parking*
- *Superior Graphics - 360×360dpi*
- *FREE Starter Kit*

RRP	£292.58
STARTER KIT	£29.95
TOTAL RRP:	£322.53
SAVING:	£112.20
SILICA PRICE:	£210.33

£179
+VAT = £210.33

192 CPS DRAFT 9 PIN



SWIFT 9 - COLOUR!

The Citizen Swift 9 is perfect for those who require high quality dot matrix black or colour printing at a budget price. The print quality of Swift 9 rivals that of other manufacturer's 24-pin models.

- *9-pin Impact Printer*
- *Print Speed 192cps Draft*
- *3 NLQ Fonts (48cps)*
- *8K Buffer*
- *Epson & IBM Graphics Emulation*
- *Advanced Paper Parking*
- *FREE Starter Kit*
- *FREE Colour Kit*

FREE! COLOUR KIT

RRP	£280.83
STARTER KIT	£29.95
COLOUR KIT	£44.65
TOTAL RRP:	£355.43
SAVING:	£133.35
SILICA PRICE:	£222.08

£189
+VAT = £222.08

192 CPS DRAFT 24 PIN

SWIFT 24 - COLOUR!

The Citizen Swift 24 is one of Europe's best selling printers and has won awards including Printer Of The Year 1990. Its rapid print speed, quality and black or colour options, make it a natural choice.

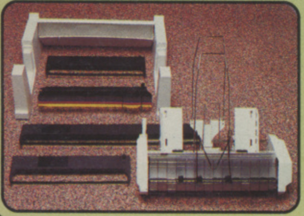
- *24-pin Impact Printer*
- *Print Speed 192cps Draft*
- *4 NLQ Fonts (64cps)*
- *8K Buffer*
- *Epson, IBM & NEC P6+ Emulation*
- *Advanced Paper Parking*
- *FREE Starter Kit*
- *FREE Colour Kit*

FREE! COLOUR KIT

RRP	£428.88
STARTER KIT	£29.95
COLOUR KIT	£44.65
TOTAL RRP:	£503.48
SAVING:	£199.15
SILICA PRICE:	£304.33

£259
+VAT=£304.33

PRINTER ACCESSORIES



SHEET FEEDERS		
PRA 1200	**120D**	**£71.38**
PRA 1215	**124D/Swift 9/24**	**£88.70**
PRA 1228	**124D/Swift 9/24**	**£42.00**
SERIAL INTERFACES		
PRA 1189	**120D+**	**£56.45**
PRA 1209	**Swift 9/124D**	**£32.25**
PRA 1709	**Swift 24**	**£26.38**
PRINTER STAND		
PRA 1242	**124D/Swift 9/24**	**£24.03**
ORIGINAL RIBBONS		
RIB 3520	**120D/Swift 9 Black**	**£4.11**
RIB 3924	**124D/Swift 24 Black**	**£4.70**
RIB 3936	**Swift 9/24 Colour**	**£15.63**
COLOUR KITS		
PRA 1236	**Swift 9/24**	**£39.65**

All prices include VAT and Free delivery.

FREE! STARTER KIT

Every Citizen printer from Silica, comes complete with the Silica Printer Starter Kit, including everything you need to get up and running with your new printer immediately, FREE OF CHARGE!

- *3½" Dual Format Disk with Amiga & ST Printer Drivers*
- *3½" Disk with Drivers for Microsoft Windows 3*
- *2 Metre Parallel Printer Cable*
- *200 Sheets of High Quality Continuous Paper*
- *200 Continuous Address Labels on Tractor Feed*
- *5 Continuous Envelopes on Tractor Feed*

If you already own a printer, and would like a Silica Printer Starter Kit, you may order one (ref: KIT 5000) for the special Silica price of £24.95 - £5 off RRP!

NORMAL RRP
£29.95

SILICA SYSTEMS OFFERS YOU

- ***FREE OVERNIGHT COURIER DELIVERY:*** On all hardware orders shipped in the UK.
- ***TECHNICAL SUPPORT HELPLINE:*** Team of PC technical experts at your service.
- ***PRICE MATCH:*** We normally match competitors on a "Same product - Same price" basis.
- ***ESTABLISHED 12 YEARS:*** Proven track record in professional computer sales.
- ***£13M TURNOVER (with 60 staff):*** Solid and reliable with maintained growth.
- ***BUSINESS/EDUCATION/GOVERNMENT:*** Volume discounts available for large orders.
- ***SHOWROOMS:*** Demonstration and training facilities at our London & Sidcup branches.
- ***THE FULL STOCK RANGE:*** All of your PC requirements from one supplier.
- ***FREE CATALOGUES:*** Will be mailed to you with offers and software/peripheral details.
- ***PAYMENT:*** By cash, cheque and all major credit cards.

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or some technical help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is one of the UKs leading independent computer dealers and provides a quality service to users at home, in education and in business throughout the nation. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature on the Citizen printer range and begin to experience the "Silica Systems Service".

SILICA SYSTEMS

MAIL ORDER:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX		**Tel: 081-309 1111**
Order Lines Open:	Mon-Sat 9.00am-6.00pm	No Late Night Opening	Fax No: 081-308 0608
LONDON SHOP:	52 Tottenham Court Road, London, W1P 0BA		**Tel: 071-580 4000**
Opening Hours:	Mon-Sat 9.30am-6.00pm	No Late Night Opening	Fax No: 071-323 4737
LONDON SHOP:	Selfridges (1st Floor), Oxford Street, London, W1A 1AB		**Tel: 071-629 1234**
Opening Hours:	Mon-Sat 9.30am-6.00pm	Late Night: Thursday until 8pm	Extension: 3914
SIDCUP SHOP:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX		**Tel: 081-302 8811**
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E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

WHAT'S NEW

The latest hardware and software in small, easy to handle chunks. The facts, the whole facts and nothing but the facts...

Going up

PRODUCT:	**286 PC upgrade card**
NAME:	**Hyperace 386SX**
COMPATIBILITY:	**PC (IBM PS/2 model 50)**

Just because you have a 286-based PC doesn't mean that you have to be left out on the DOS speed stakes. A new upgrade board from Chippenham-based Hypertec means, according to the company, that 286s, beginning with the IBM PS/2 model 50, can be painlessly upgraded to 386 productivity.

The Hyperace 386SX card adds a 386SX processor running at 20MHz, as well as 64Mb of cache memory. The additional cache memory is of the 'zero wait state' variety. There is also a slot for a 80387 numeric co-processor.

The company tells us that both Norton SI and Landmark speed tests have shown that the installed card can increase processing speed to 50MHz.

Price:	£449
Availability:	Now
Target users:	At the moment IBM PS/2 model 50 users. It is expected that compatiblity with other PCs is forthcoming
Contact:	Hypertec: 0672 63936
Perceived competition:	None at the moment.

• Speed isn't everything, but it certainly does help when working through acres of spreadsheet. This board could help your 286 to live up to expectations

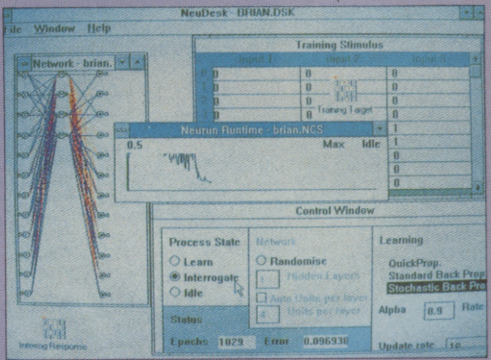
Neural kids

PRODUCT:	**Neural Networking tools for Windows**
NAME:	**Neural Desk**
COMPATIBILITY:	**PC**

Neural Networking was one of the buzz phrases of the late 80's and early 90's. People were then talking about computers which would be able to emulate the human brain before the century was out. Now they are becoming more serious about the possible applications.

Neural Desk **is in fact a Windows-compatible software suite rather than a hardware-based brain neuron emulator as its name might lead one to believe. It features three modules:** ***Neudesk, Neumodel*** **and** ***Neurun.*** **Basically the set-up enables users of neural nets to explore the potential of their systems, developing new applications or linking with existing applications, using the Windows graphical user interface.**

To run the system you will need a 286 or upwards with 2Mb RAM, and a 20Mb hard disk. Ideally a 386 with 387 math co-processor, 4Mb of RAM, 40Mb hard disk and VGA monitor are required. You will also need Windows 3 or later running under DOS 3.0 or above.



• Does your computer brain hurt? Well the remedy might be to lay your hands on some software to nudge its neurons

Price:	£985
Availability:	Now
Target users:	Developers and users of neural networks
Contact:	Neural Computer Sciences: 0703 667775
Perceived competition:	No other company is providing this kind of end-user/developer software for neural systems.

Type cast

PRODUCT:	**New typefaces**
NAME:	**Typografica Newsletter and Decorative collections**
COMPATIBILITY:	**PC**

Desktop publishing is not just a matter of slapping pictures on a page. You also need text. Typografica's new typeface collections seek to take on two ends of that area. The Newsletter set comprises two headline fonts, Futura and Toujours, and two faces for use in body copy: ITC Galliard and ITC Clearface. All four faces come in bold, italic, bold/italic and roman.

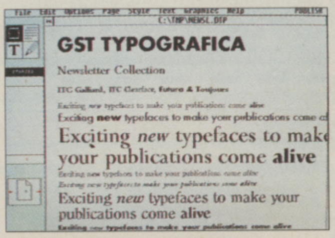
The Decorative collection features eight faces of a more flamboyant nature: Europa, Gospel, Cargo, Wagner, Tudor, Sprite, Mercury and Ravel. Again these come in the standard four weights.

The Typografica range of fonts is compatible with a wide range of desktop publishing packages working under GEM and Windows. These include: *Timeworks Publisher*, *PageMaker*, *DeskPress*, and *Ventura*. There is also support for database packages such as *SuperBase IV*, *Excell* and *Wingz*.

Both of the new collections come with extended character sets which make for clearer reproduction of accented character sets.

Price:	£92.82 each. However a special offer which lasts until 31 October means that both packs bought together will cost £150.40
Availability:	Now
Target users:	PC using desktop publishers and database users
Contact:	GST: 0480 496789

Perceived competition: Highest up the list is Bitstream with its range of PC-compatible typefaces.



GST TYPOGRAFICA

Newsletter Collection

ITC Galliard, ITC Clearface, Futura & Toujours

Exciting *new* typefaces to make your publications come **alive**

Exciting *new* typefaces to make your publications come **alive**

• The Newsletter collection from Typografica features some strong headline fonts to add character to even the dourest database output

• Games playing – is it all humbug? But maybe your hand to eye co-ordination needs a workout with a joystick and an infra-red joystick connector

Sticks of joy

PRODUCT:	**Joystick and infra-red joystick connector**
NAME:	**Gravis/Freedom Connection**
COMPATIBILITY:	**Amiga, C64, Atari VCS, Sega Mastersystem**

Games playing, eye-to-hand co-ordination, reflexes being sharpened, or just brain bubble gum? Either way you will need a joystick to shoot-'em-up or knock-'em-down.

The Gravis from Spectravideo comes with eight position control which is possible to pre-set, there are also three independent fire buttons.

The Freedom Connection is a strange entry to the gallery of computer hardware add-ons. It is an infra-red connector for standard joysticks.

One end plugs into the computer, while the other attaches to the joystick. The company claims that the joystick connector can even been carried around on your belt, whatever the use might be for that.

As a side issue, turn to page six and the Shoot from the Lip section to read extracts from the press releases relating to these products. If nothing else it might make you smile.

Price:	Gravis: £46.98 for the Amiga, ST, C64, Spectrum, CPC. £58.69 for the PC version. Freedom Connection: £23.44 for the Amiga, C64, Atari VCS and Master System
Availability:	Now
Target users:	Games players
Contact:	Spectravideo: 081-900 0024

Perceived competition: None as far as the infra-red connector is concerned. Companies such as Konix and Cheetah are direct competitors for the joystick. ■

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Pipe Mania - *By Empire Software*	£24.99
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Trivial Pursuit - *By Domark*	£19.95
ART PACKAGE - £89.95:	
Photon Paint 2.0 - *By MicroIllusions*	£89.95
TOTAL RRP:	£319.73

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EXPRESS MAIL

Haydn Fitz-Williams gets to the heart of the matter this week with your views on Public Domain pornography, games pirates and gives you a chance to voice your views on what you think of *Express*

Plain insulting

Should you not be cautious – your response to P Young's letter in issue 143 – about the FWs?

Although 'Fitz' only means 'son of', it is – and I quote my encyclopedia – 'specially used to indicate natural sons of royal blood'. So perhaps you are a right royal bastard after all.

PS. Only joking

Alan D Cox
St Clears

YES, AND CHECK OUT *King Lear* to see just what they can do. (For the more pedantic amongst you, I do realise that Edmun is not in fact royal.. but you still wouldn't mess with him.)

Confessions

I too must confess to pirating software, but recently I saw that it was useless, and did more harm to the software industry than I realised. So why am I writing? Well to tell you (and the public) why.

I pirated software because I was not strong enough to break away from the crowd a suitable phrase would be 'I followed the sheep'.

The fact was everyone else was pirating, getting away with it and having lots of fun with all their new games.

So I started pirating software and at one point I had over 30 contacts in some of the major groups.

Eventually the novelty wore off and the endless streams of jiffy bags, covered in sellotape got to me and I gave it up.

But the novelty wore off only two weeks into my swapping days, what about the other nine and a half months?

Well the swapping was really a cover-up to have a good time and meet friends, at all the shows you could go and meet new contacts, a couple of times we would invite people down from the north to have a good time.

The point is that many pirateers are not infact trying to rip the companies off but find it as a way to meet new friends with a common interest in a field that are both comfortable with.

But don't get me wrong, this is not an excuse for my actions, but more the reason for why we do it. I know I cannot excuse my actions and I agree with P. Bates of Derby that if companies were to produce demos then my life as a born again buyer of software would be easier. Thanks for listening...

PS. If this letter is to be included please omit my name and address since I still know a lot of people who would be worried that I was going to start giving out their address and name to FAST.

This I would not do – and if I did I don't think I would survive till the end of the week...thanks.

PPS Any donations to my fund to buy Pen Pal would be gratefully accepted.

AH
Somewhere in England

THE LAST LINE OF YOUR PS is quite fascinating. I would have thought that living in fear of your life is an excellent incentive not to get involved with this area of computing. But maybe you're being a little flippant n'est pas?

Does any one know of any gangland killings, beatings or even threats ever having been made on account of *Rainbow Islands* or *Kick Off*? We would be intrigued to hear.

As for the rest of the points you made, you're right, getting together and meeting people is no justification for piracy. If these people are that keen to meet up, they could at least try to use all the pooled expertise to produce some high quality games. They could even set up a software house which markets these games in demo form. But do they? No, it's far easier to rip other programmers off.

PD magic

I had been planning on writing the above for several months. In this week's *NCE* you raise another hoary (whorey?) chestnut – pornography, so I thought I'd raise my two-pen'orth.

I don't own a modem, and won't until Telecon loses its monopoly and reduce its charges. (The miss-spelling is deliberate). I am against porn being available to people under the age of 18. If you can be sent abroad to kill Arabs surely you have the right to look at what you like?

I am against the nanny state, a situation which has worsened under the guidance of the most tyrannical nanny this century. Porn is blamed for all kinds of crimes, particularly those of a violent sexual nature. Both Holland and Denmark have proved that there is not necessarily a link between the two and published statistics prove the opposite.

At 37 I have seen most types of porn from the sickening to the innocent (page three). It does make me wonder what goes on in some people's minds. I've seen some PD porn but none of it was particularly sexually arousing. Some of it did exhibit a pathetic waste of programming ability.

What does surprise me is that sysops and PD libraries blame the punters. They are responsible for any pirated software, or porn, in their catalogue but I think we are all too concerned about the possible effects of unsavoury material.

The tabloid press made much of the connection between the RAMBO films and the Hungerford massacre. Where were their journalists when it was revealed that Ryan didn't see those films, or any similar ones?

Hindley and Bradey made little mention of porn in connection with their despicable acts.

I believe many sick people, when caught, blame whatever is currently in vogue – be it porn, horror movies, computer games, or their mother-in-law, rather than admit that they themselves are at fault. The end result of this is further repression of individual freedom in what is far from being a free country.

To finish I have a couple of complaints about the best weekly computer magazine. The letters page should be at least three pages long and the term is 'bated breath' not 'baited breath' as many computer journo's seem to think. I've seen the latter in more computer mags than you could shake your rod at.

Hope I haven't preached too

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☐ Excellent! ☐ Good
☐ Reasonable ☐ Poor ☐ Ripoff!

3. Out of ten, how much did this week's cover make you want to look inside?....................../10

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5. How does it compare with previous issues you've seen?
☐ Much better! ☐ Slightly better
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6. Rate out of ten this and any other computer magazines you read regularly:
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Return to: **NCE, Issue 144 Survey, Future Publishing, Freepost, Bath, Avon BA1 2XF.**

ON THE COUCH

This week the Doc with the smock takes a look at SIMONE HILL from READING. Simone wrote in and told us all about the machine she owns, her favourite software, and the machine which would meet her innermost digital desires. All this information came on the back of a cheap postcard. All the advice comes in expensive chunks (*we're paying for it – Ed*). If you would like a wee bit of analysis to smooth out the edges, then write to: Leather Couch Clare, *New Computer Express*, 30 Monmouth Street, Bath, Avon BA1 2BW. It could be the first paragraph in the next chapter of the book of your new life!

Now then Simone, take the ribbon from your hair, shake it loose and let it fall. Psychoanalysis time is here. So, tell us about the computer-related items which rule your life...

● MACHINE OWNED: Amstrad ALT 386

● FAVOURITE SOFTWARE: *SuperCalc*

● DESIRED MACHINE: Sun workstation

Dull. That's really all I have to say at the moment, dull. There is a continuity to your present possessions which seems to suggest a need for security. Underpinned with a fetish for organisation and down to earthiness (all the points in Simone's letter were neatly tabbed, with margin notes explaining background. The letter ran to five pages).

All of this suggests a stable personality who merely wishes to see her name in print. And it is this which is of more interest.

You say that you want the Sun workstation because 'It is a really sexy computer don't you think?'.

No, computers are not sexy things. A transference of straightforward desire from a human object to a machine is a major sign of a deep-seated neurosis. Combine this with your wish to have your full address printed in order that you can 'get together with other like minded people' and we have a classic case of obsessional sublimation coaxed through the psyche with a large dose of superiority syndrome – the Sun.

PROGNOSIS

You are ideally suited for a move to Haiti where you could set yourself up as a government official and Tom Tom Macut informer. Your need for organisation could be well used in a flowering bureacracy. Your sublimated need for contact would blossom, and you would be thousands of miles away from the rest of us.

---

much. I look forward to your taking the piss in a forthcoming NCE letters page.

Bill For
Derbyshire

WELL BILL, I HAD TO BUTCHER THIS letter in order to get at least some of it in. Your initial points relating to piracy will, I am sure, be used at a later date. As for the question of the moment, PD, I think it's time for one point to be made clear. For some reason, everyone has picked up on the Porn angle. In the PD article, pornography was just one of the areas explored. The others were viruses, violence and piracy. What does anyone think about those?

As for the 'Nanny state' argument... that was not what we were proposing. The proposition was to form an organised, *publicly* accountable union of PD members. Nannying from within if you will. And with that in mind....

Come together?

Following your article on PD in the NCE (issue 142) I feel I had better write to you concerning certain events about a year ago.

I wrote to every PD company suggesting a self-financed 'ombudsman' scheme. This was due to the fact that I had been blatantly ripped off by a certain PD company (£5 for a disk) and I was concerned over the sexual nature of some disks.

I actually got to see some of these at a friend's house and was appalled.

I suggested that the PD companies should give a small per cent of their *'profit'* (in italics because they are not supposed to make any) to this scheme. This would go into a fund for the following purposes:

- **To attempt to protect the consumer if a company liquidates**
- **To advertise to promote its existence**
- **To control the pornography available if not to ban it, to tone it down**
- **To get assurances it was for over 18 years only.**

In return each company would get an official 'seal' for their ads showing that they complied were reliable. The results of this are perhaps more interesting. Out of some 30 libraries four (and a year later five) replied.

Two thought it a good idea but one could not afford the fee. This I sympathise with. Quite honestly some PD libraries are non-profit making and have little spare money.

Then again some are not. One library rang me up. They told me the idea was unworkable as how could I tell what was/was not offensive? They are now one of the biggest PD libraries in the country and continue to sell so called XXX disks. There is too much money in it to drop it willingly.

Twenty-five did not reply. That alone speaks for itself. I would ask the PD libraries to do something before it is too late and legal restrictions control the established forum for new talent, and above all rot away the fun element.

Self regulatory bodies – like FAST – have been shown to be in the end beneficial to all but a small mindless minority.

I fully admit that there is a problem controlling a supposedly nebulous PD forum, but PD companies are now well established businesses in many cases and are far from being in an ether.

I await discussion on this.

Roy Chambers
Cumbria

ROY, SORRY FOR NOT informing you that we were going to publish this letter, busy, busy you know. Anyway, I think we have already made our point in terms of ombudsman for PD.

In terms of there being too much money in porn for the PD companies to drop it willingly, I would prefer to be more charitable about the whole thing. There would not be any money in it at all if people were not downloading it from BBSs or buying it from PD libraries. Apportioning blame is an exercise which should be carried out with care.

Service!

After a few weeks study of the various types of home computer available, we took the plunge and purchased an Atari STE some eight weeks ago. Being new to the computer scene, we did a few of the right things and read up on all the need to know stuff in the popular magazines. In order to increase our stock of software we invested a modest sum of £15 in a selection of PD software from Jennix of Kent.

The software selected covered a variety of computer topics in order to increase our knowledge in these subjects. We are familiar with all the normal day to day operations of the desktop and mouse features offered on the Atari, but had genuine problems in 'opening' some of the programs sent on the PD disks.

Due to the disappointing results of this first venture, we sent a quantity of the discs back to Jennix listing the faults and problems we had found and rather than request a refund, selected some alternative titles as replacement.

Imagine our surprise when we read the letter from the Proprietor (Mr N Klee) especially the tone of the whole tome that came back, with the final insult of holding the returned disks to ransom for the paltry sum of 38 pence.

Needless to say, Jennix will be keeping the ransom disks and we will most definitely NOT be trading with them again.

Please make your readers aware of the business attitude that prevails at Jennix towards their most valuable asset, the customer.

D R & E E Burgin
Chippenham

WOULD ANY REPRESENTATIVES from the company in question care to respond to this?

Sexist or sexy?

I have never regarded *New Computer Express* as a sex stimulant, but the Trojan advert you ran last week is downright phallic. If it is "really aiming to please" Trojan is coming at it the wrong way. Just what sort of market does it want to hit?

Was it not enough to make crude jokes about "light guns in your pocket" in Trojan's competition feature? Do you have to go on about "deep grip for good handling" and triggers? I'm surprised you didn't add it can shoot up to three metres and runs from the mains.

I hope this is just a phaz-er you're going through. It's no wonder we have a Trojan virus.

Sharon Marshall
Blackburn

AH YES, THE HOARY OLD question of subliminal sexual content to advertising. Cadbury's Flake is now joined by Trojan with its light gun. Does anyone else have any 'I've spotted some sexual innuendo' in computer advertising' stories? Why not send them in.

Vic rubbed

What with history being cyclical, will my Vic 20 will ever come back into fashion?

JP Gregg
Erith

NOT UNTIL NAPOLEON returns. ■

Write Now

Write and tell Haydn Fitz-Williams what you think! Reach him at: Express Mail, 30 Monmouth Street, Bath BA1 2BW. Sorry, no personal replies, even with an SAE and remember, only SOME letters win a fiver

☎ On-line mail

Own a modem? Then squirt us a letter. Express has its own area on Aspects bulletin board (061 792 0260) where you can leave mail and upload/ download files.

We also have our own conference on CIX. Give this on-line service a ring on 081-390 1244 and talk to us direct! You can also leave E-mail for us on Prestel and Micronet - get in touch on 011112623, or on Telecom Gold @84:txt152

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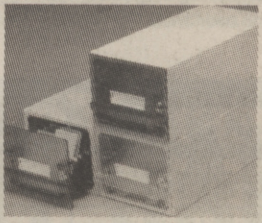

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AMIGA

- **Major upgrade for Silica's *Scala***
- **Exclusive review: Omega's Sound Enhancer!**
- **Superfast comms with SupraModem**

SCALA UPGRADED

Fans of Silica Systems' acclaimed *Scala* presentation system will be pleased to learn that a major upgrade is now available. As reported exclusively in issue 143 of *New Computer Express*, *Scala 2.0* is virtually complete, but this latest version bridges the gap between the two releases.

Since its release, *Scala* has rapidly become the Amiga's best selling presentation system, outselling its main competitors by a clear margin. With the release of version 1.1 *Scala* has become the most powerful presentation program available for the Amiga.

Features include:

- ANTI-ALIASING – As any video enthusiast will tell you, even the Amiga's high resolution screen modes can still look a bit jaggie when producing video titles. Version 1.1 of *Scala* has realtime anti-aliasing built in as standard, giving the impression of a much higher screen resolution with smooth, jaggie-free fonts.
- AREXX SUPPORT – *Scala* 1.1 offers full support for ARexx, a system which enables various Amiga programs to communicate with each other. This means *Scala* can be directly controlled by other ARexx-compatible applications, making it ideal for multimedia.
- COLORFONT SUPPORT – Now you can take advantage of all those beautiful ColorFonts from Kara. This should have really been included in version 1.0. The one drawback with Colorfonts is that as soon as you import a second ColorFont, it affects the palette of the first, changing its characteristics substantially. *Scala* avoids this problem with its powerful (and fully automatic) palette remapping facility.
- OUTLINE FONTS – When used on a machine with version 2.1 of Workbench, *Scala 1.1* fully supports Compugraphic Outline fonts such as those marketed by Gold Disk for use with its range of DTP (Desktop Publishing) software. Outline fonts allow you to produce text at any point size without introducing jaggies.

Scala costs a hefty £264.38. Look out for a full review soon.

☎ Contact Silica on 081-309 1111.

SOUND ENHANCER

You've probably read all about Omega Projects' Sound Enhancer in other publications, but to date nothing has been seen of what is being called the most revolutionary sound-related product ever. The manufacturer claims that the £35 unit improves the sound quality of the Amiga beyond recognition. Is it true or is it just hype? Read on to find out.

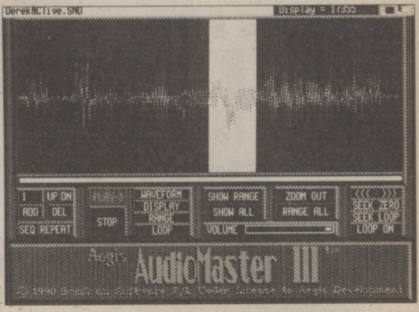
Thanks to those very nice people at Omega Projects, I've been lucky enough to have been able to have a play with the only Sound Enhancer in existence. At the time of going to press, Omega was still waiting for both casings and PCBs (Printed Circuit Boards) to arrive, but I managed to talk the company into parting with its one and only pre-production model.

The Sound Enhancer was originally designed for use with Omega's *Sound Trap III* sampler, a quite excellent little package for around £30. However, it will also work equally well with virtually any program that produces sound via the Amiga sound chip (MIDI applications won't be affected!). This includes all games, music packages and samplers – even the Intuition Display Beep() function sounds nicer!

The unit plugs in between the Amiga's sound jacks and either your monitor or hi-fi (depending on which you use). It takes it power from the serial port via a little cable with a 25-pin connector. On the front of the unit are two controls, a proportional knob which controls the unit's effect and an on/off switch.

I must admit that I was a little sceptical when I first heard about the Sound Enhancer, but actually seeing one in real life has more than put these fears to rest. Put simply, I was absolutely amazed at the difference it made.

The greatest effect was on high frequencies (hi-hats etc), but it also makes other frequencies far sharper, including bass and mid range. The net result is far punchier bass and a quite superb high frequency response. It's almost like having a brand new sound chip installed inside your machine.



• Omega Projects' new Sound Enhancer works particularly well with sound samplers like *AudioMaster*. For a mere £35, it improves the quality of the Amiga's sound way beyond belief

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If you enjoy the quality of the Amiga's sound, then you'd be a fool not to get your hands on a Sound Enhancer.

☎ Omega Projects is on 0925 762885.

MASS STORAGE NEWS

As any hard disk owner will tell you, backing up a hard disk can be a real pain. Even a fairly small capacity drive like Commodore's own A590 can take literally ages to back up on to floppy disks using a utility like *QuarterBack*. But once you start talking in terms of 80Mb and more, major amounts of both time and disks are required.

However, there are alternatives. One of the most popular backup systems used with the corporate market is the TapeStreamer, a sort of glorified tape recorder. Several tape streamers are already available for the Amiga (the Xetec unit, for example), but US-based TTR Developments has come up with a system to beat them all. Its Digital Audio Tape-based SCSI tape streamer can backup a massive 1.3 Gigabytes (that's 1,300Mb!) onto a single tape. What's more, it's fairly cheap – the US price is just over $600. This price includes the SCSI-compatible tape streamer hardware, all the necessary software and a single 1.3GByte cartridge.

☎ TTR is on 010 608 277 8071.

If you're after something a little different, Xetec's new MOX-600 Optical drive may be just what you're looking for. This 600Mb optical drive offers the storage capacity of a CD-ROM but with a major difference – you can write to it as many times as you like (unlike WORM drives which can be written to only once). What's more, it uses removable cartridges, which allow you to increase the storage capacity still further simply by buying new cartridges.

No price details are available yet, but I'll let you know as soon as Xetec get back to me.

☎ Xetec is on 010 913 827 0685.

SNIPPETS...

Comms fans after even faster transfer rates may well be interested in the new SupraModem 9600 from the Supra Corporation. It supports the V32/V42bis standard which allows rates of up to 38,400 bits per second (bps) – that's over 16 times faster than even the fastest 2400 baud modem!

The unit offers full error correction and automatic adjustment to the optimum rate and protocol. It costs $700.

☎ For more details contact Supra on 010 180 0727 8772.

Fancy a completely hard disk-based Amiga 500? If so, then ICD's new Prima may well be for you.

It's a high performance internal hard drive system for the A500 that replaces the internal drive inside the machine with a high speed SCSI drive. And, with ICD's ShuffleBoard extension, you can have your external drive (you'll have to buy one if you want to use floppies!) act as drive DF0:.

☎ For more, phone ICD's UK distributor Silica Systems on 081-309 1111.

Jason Holborn

ST

- **Mac or PC: which should the ST emulate?**
- **British adventure with the Lucasfilm feel**
- **Control a whole MIDI empire from your ST**

FOURTH AND FINAL ST

Atari has some serious plans for the ST. Sam Tramiel revealed that the company has four new STs on the way. It has already announced the two portable STs, STyle and Pad, and has even shown prototypes of the machines at a Chicago show three months ago. The Falcon super-computer is the third ST and now details of the fourth are coming to light.

The computer press has been buzzing with the news that the fourth ST would be an ST-PC, or an ST with a PC emulator inside its case. Everyone at Atari denies this will become reality, but now the full story is emerging.

It seems that Atari has been toying with the idea of an officially badged PC emulating ST for a long time. It produced a couple of machines and ran feasibility checks on whether such a machine would sell. However, during this research period the company apparently decided against it.

On the face of it, an ST-PC seems like a great idea. Not only would you have all the benefits of the massive range of software for the ST, but also the capability to run PC software. Most businesses still cling to the MS-DOS standard, so an ST this capability would have massive cross-market appeal. However, there are inherent problems associated with this.

For a start, no matter which PC emulator Atari used, you still couldn't run colour VGA graphics. These days the only PCs worth their exorbitant price are VGA (that is high resolution) machines. The vast majority of emulators available for the ST only support monochrome CGA or EGA graphics at a vastly reduced speed.

Given these limitations and the cost of releasing an ST which *did* emulate a VGA PC I feel that Atari would be unwise to release such a machine. After all, you can buy a PC very cheaply these days and files from these computers can be read straight from the desktop by any of the ST range.

What would be a clever idea would be for Atari to release an Apple

Continued on next page ➤

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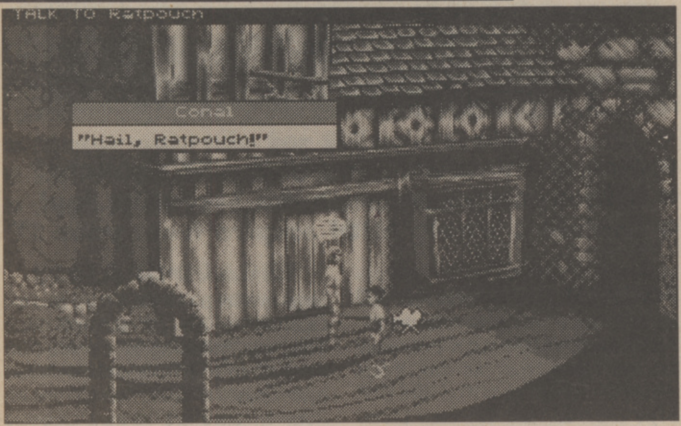
MACHINE SPECIFICS



• Most of the best graphic adventures come from the US, but *Vengeance* from Revolution Software shows that the British can still produce the goods. Look out for it on the shop shelves soon

◀Macintosh emulating ST. The Spectre GCR cartridge which is produced by Gadgets by Small in America is a superb piece of hardware which has many advantages over the expensive Mac Classic, Mac Plus and SE/30 computers, not least of which is the extremely fast hard drive accessing speeds.

But the Spectre GCR is an expensive cartridge – to buy it with the Apple ROMs you won't get much change from £400. However, other companies attempting to get around the tight Apple copyright laws have produced clean laboratory versions of the Apple ROMs which don't include any of the original code. These chips could be mass produced and released cheaply, making Macintosh clones a major possibility.

If Atari decided to produce a Mac emulating ST, this is the only root it could take. It is also the most obvious. If Atari wishes to snatch some of the Apple business market, this is one way it could do it.

BACK WITH A VENGEANCE

There's something about a graphic adventure which enables you to really climb inside the game to an extent that you never can with a simplistic shoot-'em-up. The vast majority of these games originate in America, so it's nice to see a British software house creating its own graphic world.

Vengeance is an adventure set in the Dark Ages. It has been produced by the Revolution Software team which has developed a system called 'Virtual Theatre', a graphic adventure environment much like Lucasfilm's point and click system. The first results of this are nearly ready and they look excellent.

The graphics are top notch, detailed backgrounds with excellent touches – the slowly wafting torches on dungeon walls add much to the atmosphere.

The characters you meet in the game all have very strong, individual personalities. The character interaction has been cleverly devised and shows many elements of Lucasfilm's speech environment; you're given four choices of questions to ask and these questions lead to others in a kind of branch effect.

If you're lucky, some of the characters will join forces with you. One of these willing minions is a chap named Ratpouch, a failed court jester you help to escape from jail. Ratpouch may or may not help you but wanders around, getting in the way when you least want him to.

The plot of the game involves destroying an evil magician who's been doing all sorts of nasty things to your quaint *Dungeons and Dragons*-type world. There are hundreds of puzzles to solve along the way, most of which can only be fathomed if you talk to all the people. The unfinished version I saw looked brilliant and I wait with baited mouse for the final version.

Andy Hutchinson

Andy Hutchinson is news editor on ST Format,*the UK's biggest and best magazine for the whole Atari range. Buy it from your newsagent every month.*

A RECORDING STUDIO IN YOUR HOME

Evenlode Soundworks has put together a rather tasty new bundle. These chaps are the British distributors of the Steinberg range of MIDI software which includes *Cubase* and *Cubeat*.

The *Steinberg StudioPac* comprises the *Cubase* sequencing program and the Midex Plus hardware system and costs £645. *Cubase* has recently been updated and now represents the only serious rival to C-lab's *Notator* package.

Basically Midex Plus enables you to connect a whole wodge of MIDI devices to your ST, all controlled by *Cubase*.

Evenlode Soundworks lives at The Studio, Church Street, Stonesfield, Oxford, OX7 2PS.

☎ 0993 898484.

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Access

PC

- **New low cost DTP program from Microsoft**
- **The 8514/A is dead – long live the XGA**
- ***Ventura for Windows* in glorious colour!**

MICROSOFT TURNS PUBLISHER

Microsoft is completing work on an entry-level desktop publishing (DTP) program for Windows slated for an Autumn release. *Publisher for Windows*, expected to sell for under £100, will also be Microsoft's first DTP package.

Publisher includes *Page Wizard*, a tool which enables you to custom design your own pages determining such things as the number of columns and where pictures should go. It also includes a spelling checker, a text editor and a 'borders' feature, which duplicates a picture around the edges of a document.

However, what *Publisher* lacks is sophisticated graphics and frame-handling capability – you cannot link a picture within a frame to its caption. And it doesn't have any style sheets either.

☎ Call Microsoft on 0734 500741.

COLOUR *VENTURA*

Sophisticated colour capabilities within *Ventura*, which have previously been the sole domain of the Macintosh, will now make the transition to Windows via a joint development agreement between Ventura and Pre-Press. The new colour facilities let users view images on screen in full colour, rather than seeing a black "X" where the graphics are to be placed.

The development effort between Pre-Press and Ventura has also resulted in four new modules – a scanning program, an image manipulation program, a colour separator for novice users and a professional colour separation program.

Each will be sold as 'Professional Extensions' to the base publishing product but each can be used as stand-alone products that will be accessible directly from the *Ventura Publisher for Windows* menu.

8514/A BITES DUST

IBM is to discontinue its high-resolution 8514/A graphics board from October 2, although it will support boards that are in use. The move may help to promote XGA – a graphics board IBM wants to establish as the next desktop computer standard – but it won't be welcome to non-PS/2 and low-end computer users.

Although the document lists XGA as a replacement product for 8514/A, it can't be used in 286 or non-Micro Channel Architecture computers (ie, ISA and EISA), two areas where third party versions of 8514/A could be used. IBM has promised to release an ISA version of XGA, but hasn't said when it will be ready to ship.

MERGE SURGE

Is it the hot weather or something? First Borland and Ashton-Tate merge and now Novell is set to buy out Digital Research for a mere $80 million.

Continued on next page ➤

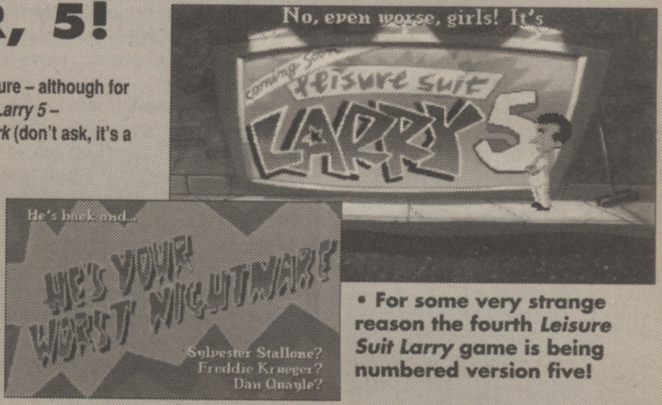
LARRY 4, ER, 5!

Leisure Suit Larry is back in his fourth adventure – although for some reason it will be known as *Leisure Suit Larry 5 – Passionate Patti Does a Little Undercover Work* (don't ask, it's a long story!).

In the latest episode you play both Patti and Larry. While Patti investigates corruption in the music business for the FBI Larry hunts for the 'Sexiest Woman' – nothing changes, huh?

Leisure Suit Larry 5 promises to be raunchy, sexy and thoroughly disgusting – much to the relief of the many Sierra fans out there!

☎ Call Sierra on 0734 303322.



• For some very strange reason the fourth *Leisure Suit Larry* game is being numbered version five!

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In May AT&T spent $7.2 billion for NCR and Lotus spent $65 million on Samna Corp last Autumn.

However, it appears that the sudden flurry of mergers has been sparked by a new marketing trend. Doug Kass, an analyst with DataQuest explained, "There is a whole new marketeer mentality. Isolated technology is not as effective as earlier in the industry's history. Buy-outs, mergers, acquisitions and strategic alliances are becoming part and parcel of how the industry does business."

It appears that the by-word is diversification' – companies devoted to one primary product just cannot afford to go it alone. However, firms in niche markets, such as graphics, have a greater opportunity to grow by expanding into related categories. The merger trend is, apparently, the industry maturing rather than a levelling off of growth.

"This is concentration not consolidation," added Charlie Federman of Broadview Associates, an American firm specialising in software mergers. "Consolidation implies that the industry is shrinking and there are a smaller number of companies. That just isn't the case. With this growth comes bigger companies that can now afford to make larger purchases."

This encourages the formation and development of smaller companies. Well, that's the theory anyway.

DOS 5 CORNER

A quicky – when you upgrade to DOS 5 dump your SHARE utility. You no longer need it for large hard disk partitions.

NEW SHARPER PEN

Microsoft's latest beta version of the Windows for Pen Computing OS incorporates features specifically designed to take advantage of the pen-based platform.

New features include such capabilities as gesture support, which will allow you to create simplified macros. For example, you could establish a set of movements for inserting a paragraph of text, or boldfacing an area.

The system will also include training on the fly, which conditions the operating system to the user's personal handwriting style.

Pen-aware features in Windows for Pen Computing are comparable to those in Go Corp's PenPoint, such as context-sensitive editing, handwriting customisation, and 'raw ink', which refers to text that is left untranslated on screen. Microsoft is on track to meet its deadlines and aims to ship the final version of its OS in December.

In early September, Microsoft plans to release another beta that will include a completely rewritten handwriting recognition engine which will be able to recognise overlapping letters.

Paul Rigby

CPC

- **Codemasters' Quattro Cartoon reviewed**
- **Help for 3.5-inch disk drive owners**
- **Cheats to banish those multiface blues**

QUATTRO CARTOON

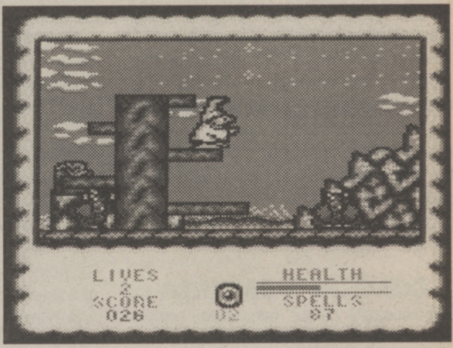
Just how big is Codemasters' back-catalogue of games? The company has just released its umpteenth *Quattro* compilation, and shows no sign of slowing up.

The *Quattro* packs all contain four full games, but sell for a budget price of £3.99. And the latest offering, *Quattro Cartoon* looks particularly good value. On offer are:

- ***Wizard Willy*** is an excellent scrolling platform game. You play the part of Willy, and your job is to kill all the monsters in your path using your trusty magic lightning bolts. You can pick up extra energy and points along the way, and special 'vanish spells' (smart bombs) for when things get too hectic.

The graphics are excellent, the soundtrack is brilliant and *Wizard Willy* is superbly playable. Codemasters could have got away with selling it as a full-price game (but keep your voice down)!

- ***Little Puff*** is even more cute. He's a little dragon who's accidentally become lost, and all he wants to do is find his way home. Unfortunately, he can't get back into dragon-land without collecting four passes scattered about the landscape.



• *Wizard Willy*: excellent graphics, a great soundtrack and real playability

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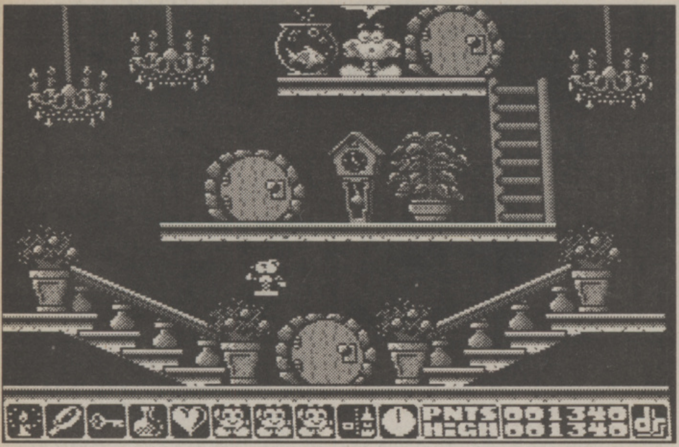

• The excellent *Olli and Lisa 3* is the best of a very good bunch on the latest Quattro games compilation

Needless to say, they're pretty well hidden, and there are plenty of monsters out to stop you getting them. However, there are objects you can collect to help you. The graphics aren't in the same league as ***Wizard Willy's***, but they're still not bad, and the game plays nicely.

- ***Frankenstein Junior*** is distinctly grisly. Your cobbled-together dad has come uncobbled, and you have to go round collecting the various bits and pieces of his bod so that you can put him together again. The action's fast and furious, but there's really not a lot to it.
- In ***Olli & Lisa 3*** the eponymous characters want to build a car, but they don't have all the parts. These are to be found in the rooms of a castle – but which rooms? Not only that, but parts of the castle are invisible until you've collected a magnifying glass.

Once you've collected all the bits and pieces you still have to put them together. This means finding the right tools and the chassis itself. The graphics are pleasant and well-animated, though the control method takes a bit of getting used to. Get round that and you're looking at the best game of the bunch.

For £3.99, it seems churlish to pick fault, doesn't it! These ***Quattro*** compilations really are stupidly good value for money. The only weak game on this latest compilation is ***Frankenstein Junior***, but even that's good for a couple of hours on a wet Wednesday afternoon. The other three are little gems.

MULTIFACE TIPS

Here's a tip sent in by Mirek Slobodzian a while ago now. It might help a few people struggling to save games with the Multiface.

"You all know that Multiface 2 Plus does not save all your games properly and some of them will crash (***Bubble Bobble, Super Hang-On***). I have found a way round this:

1. After a failed attempt at loading the desired game – and you're sure it was the fault of the Multiface – reset the computer.
2. Press the red button, but don't take your finger off.
3. Press the reset button and let go, still keeping your finger on the red button.
4. Let go of it now, and the computer should either return to BASIC, or press R for Return, and then it should reset.
5. Load the required game straight away.
6. When it has loaded, press the red button (followed by Clear if it is not a 6128-only game), and save to your disk straight away. Switch the computer off and then load in from your saved disk.

This should work for everybody with a Multiface 2 Plus. It works for me, and I now have just about all my tape games on disk."

Rod Lawton

Rod Lawton is editor of Amstrad Action, *the biggest, best and brightest magazine for the Amstrad CPC. Buy it from your newsagent every month.*

SWAPPING ASCII FILES

If you have a 3.5-inch second drive, the chances are that sooner or later you'll be wanting to experiment with swapping ASCII text files with IBM PC clones.

Well, it won't always work. And it could be due to something painfully simple, as Mike Parking of Helensburgh, Dumbartonshire, explains:

"When using a large capacity second drive and IBM PC compatible file formats, always type upper case letters when you save your files. The software does not necessarily do the lower to upper conversion found in AMSDOS and some IBM clones will not read filenames in lower case ASCII."

Anybody out there kicking themselves? Easy when you know how...

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C64

- **3-D Construction Kit review special**
- **Create your own games and worlds!**
- **Cheats galore for the Hits compilation**

CONSTRUCTIVE CRITICISM

3-D Construction Kit is here. And what a corker it is, too!

Having first flicked through the rather hefty manual I was very tentative when loading the package. But I needn't have been.

It loads in three sections:

- The Environment editor allows you to create and manipulate your 3-D world.
- The Condition Editor is where the game's conditions (or rules) are specified.
- The Compiler, which transforms your creation into a standalone game.

The basics behind *3-DCK* are very simple. Your 3-D world is divided into 'areas' of which up to 254 can be used in each game. You cannot go beyond the boundaries of an area, but entrances can be defined using the editor.

Once an area has been established you can begin to build whatever it is you want to build. A potential nightmare? Nope! Incredibly simple in fact.

You 'summon' 3-D shapes (cuboids and pyramids), and 2-D shapes (rectangles, lines, triangles, hexagons quadrilaterals and pentagons) into your world, where they can be stretched, shrunk, rotated, moved and shaded. This is initially awkward owing to the icons not being specified in the manual, but the concept soon becomes second nature.

To build more complicated structures, different shapes must be joined together. For instance, I made a 'house' from a stretched cuboid with a stretched pyramid on top. The door was a 2-D rectangle pushed right up to the cuboid, which, incidentally, is how all doors are created (not to mention windows). And it all took just minutes.

Shading is a breeze – the desired face of the current object is selected, then the required hue is highlighted and bingo. It's just a pity there is no facility to create your own colour combinations. Having said that it can be done with a machine-code monitor.

TOTAL CONDITIONING

When you have constructed your world, the 'real' work begins when you load your environment into the condition editor. *3-DCK* utilises the Freescape Command Language (FCL) which consists of 40 or so commands and small routines (or procedures) can be constructed to bring the game to life.

This is possibly the one factor which will deter many people from taking the plunge, as many are reluctant to learn new languages.

- GENERAL conditions are those which are executed constantly, such as score, energy levels, etc; all essential checks and tasks should be included.
- LOCAL conditions only apply to the area currently occupied and are concerned with all processes in that area.

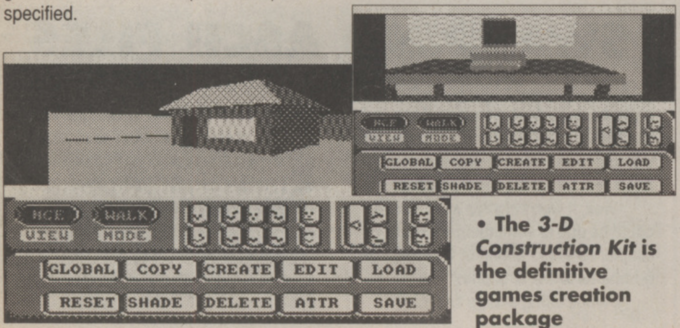
The language is a step up from BASIC, indeed very easy to pick up. Variables can be manipulated (for scores, etc), colours changed, objects destroyed or moved, sensors activated, text messages displayed, and sound effects triggered.

Creating your world could take a matter of hours, but the FCL will take quite a while to master. But let's face it, you can't expect to have a complete game up and running without any effort whatsoever.

Your final game can be enhanced by an attractive border, created using the *Advanced Art Studio*, although the examples included could be used if you're hopeless at art.

In conclusion, the *3-DCK* is *the* games creation package, and a whole lot more besides – I know of one chap who used it to plan out a house extension! Creating something along the scale of previous Freescape games is possible, but will take time. Indeed memory is tight right from the start.

If you are prepared to master the Freescape command language, and have the imagination to create amazing 3-D worlds, then *3-D Construction Kit* is all you will ever need. The whole package is almost faultless, with only a few teensy little quirks.



• **The *3-D Construction Kit* is the definitive games creation package**

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Access VISA

A final point to note: If you buy the *Kit* from your local software store you will receive the program itself (on tape/disk), the manual plus a tutorial video. However if the Kit is ordered from the Home Computer Club the video is *not* included. This is due to Domark/WH Smith having different contractual rights with Incentive, and indeed there is a hefty price difference.

Andy Roberts

CHEATS GALORE

Even though the Hits compilation isn't available in the shops until September, the following cheats may be welcomed by people who own any of the games separately:

- ***Retrograde* – Type I HATE BROS at the very bottom-right of the screen before loading the game.**
- ***Snare* – Holding down one of the function keys when pressing fire to start the game will activate a cheat; one gives infinite lives, one immunity to pits, the other immunity to aliens.**
- ***Summer Camp* – Enter your name as CALAMITY on the high score table for infinite lives.**
- ***Creatures* – Plug your joystick into port one and wait for the title music to stop, then wiggle your joystick like crazy when the high score table appears – when the Clydes turn grey, put the joystick back into port two to start the game with a difference.**

SPECTRUM

- **Getting in touch with cheap modems**
- **Garner Designs responds to its critics**
- **Revealed! All 30 passwords for *Riptoff***

CHEAP MODEMS

The wonderful and exciting world of computer comms is also a pretty expensive one. Never having enough cash for the necessary state of the art communications equipment, not to mention living in fear of telephone bills larger than the national debt of Brazil, comms is an experience which I have always missed out on.

That could all soon change, though, with the discovery of dirt cheap modems. A company called BG Services is selling the standard Speccy modem, the VTX5000 for £15! (£20 for a Plus 3/Plus 2A version). This represents astonishing value for money and at little more than the price of your average piece of software gives you access to bulletin boards, telesoftware and multi-user games amongst other stuff.

I think I can safely say this is a genuine bargain and almost certainly the cheapest way of involving yourself in the world of telecommunication.

Contact BG services at 64 Roebuck Road, Chessington, Surrey KT19 1JX for more details.

KEYPAD CORRECTION

A few columns back, Daniel Wyness revealed the deep secrets of the mysterious 128K hidden editing functions. Well, Alan D Cox of Dyfed has got in touch to tell us of a few omissions.

- 'Delete from the character the cursor is on and as far as the next space to the right' should be Extended mode then W.
- 'Cursor to the start of line' can also be graph key, Y, graph key.
- 'Cursor to the end of line' can also be graph, X, graph.
- Graph, W, graph or Extended mode then N moves the cursor to the beginning of the program
- Graph, V, graph or E mode then T goes to the end of the program.

GARNER REPLIES

The Garner Designs debacle continues this week. Regular readers will probably remember reading two letters in this column recently criticising Garner Designs, one time organiser of the acclaimed Plus 3 Users' Group and now publisher of *Sinclair & SAM Computing* magazine.

I asked for further response and got plenty of it from other dissatisfied customers as well as Daniel Garner himself. Paul Glover, Leslie Lee, James Paton and John Lord all wrote complaining of cashed cheques, long waits and disappearing goods when ordering things from the company.

Some had been previously happy members of Plus3UG and seem genuinely disappointed in the poor service they've experienced lately in one way or another.

James Paton summed up feeling well by putting the question, 'Are they a group of enthusiasts who have bitten off more than they can chew or budding entrepreneurs who think only of profits and forget the customer?'.

Phil Glover asked 'If Designs is trying its best to produce the magazine and supply mail order goods it needs encouragement and understanding, but we need to be told what's going on.'

Which is exactly what Daniel Garner, proprietor of Garner Designs, wrote to tell me about. I've had to chop bits out of his letter but hopefully this is a pretty fair edited version.

In reference to the non arrival of orders and long delays, Garner did lay some of the blame with his local sorting office which has given him, 'intermittent, yet persistent, problems with our (and other companies' and individuals') post going astray...'.

However, he goes on to say, 'There have been some delays at our end since

Continued on next page ➤

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◀ early 1991 caused by the massive undertaking required to launch *Sinclair & SAM Computing.*

'While we believed the new magazine would be popular we did not, and I believe could never, foresee the sheer number of new subscribers we received within an extremely short period.

'For a company, which at that time was geared up to deal with the relatively small scale associated with the Plus3 User Group to be suddenly and unexpectedly having to cope with a flood of subscriptions, it was inevitable that the system would not cope.

'Having said that, I think we've done extraordinarily well in coping and the backlog is quickly vanishing day by day. Within a couple of weeks we shall be up to the operating speed which you and your readers so often associated with the Plus3UG. We've also taken measures to ensure such delays do not reoccur should we get another large increase in orders again.

'So to sum up, you have my personal assurance that Garner Designs is working flat out (and I mean 110 per cent flat out) to clear what backlog remains. We have done, and will always continue to provide back up to all our customers, even when we don't have to.'

Many thanks to Daniel for putting the matter straight. Garner Designs has been one of the Speccy users' staunchest allies and best friends in the past. Let's hope it can regain its old form and return to its professional and user friendly ways without delay. Sorting out the above readers problems would be a good move in that direction.

Robin Alway

PSSST, WHAT'S THE PASSWORD?

Here for the sake of your sanity, score and game playing reputation are all 30 of the level passwords for *Riptoff*, the really rather good game recently included on a *Your Sinclair* cover tape. They were painstakingly uncovered by two faithful Speccy tipsters, Matthew Wilson and Mark Harris.

1 UHMBALOOP!
2 WEE PAUL
3 MONOCHROME
4 MOUSSE
5 2061
6 SIMPLE
7 MCAULEY
8 YOU B——D
9 BAD
10 LICORISH
11 GLOBBITS
12 OBERKORNIT
13 SKREEM
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28 SAWQ BHURD
29 BLASNO KLA
30 CIRK ROHE

Thanks guys!

MACINTOSH

- **Notebook-sized Macintosh 'clone'**
- **New Claris integrated software launched**
- **Secrets of the 'Map' desk accessory**

RUMOURS...

Apple has finally announced its deal with a Soviet computer distributor, as predicted in this column two weeks ago .

The Moscow-based company, Intermicro, is to receive its first shipments of Macs in September. According to the company's technical director, Anatoly Karachinsky, plans are in hand to release local language editions of several Mac packages by the end of the year.

A top Apple executive, Pacific region vice president Ian Diery, has been quoted in an Australian newspaper as saying that IBM is vital to Apple's future. When asked what he thought about the possibility of the recently-announced Apple/IBM deal failing, he replied, "I don't like to think!"

He also said that he expected the link with IBM to add at least $1 billion per year to Apple sales, starting in two or three years' time.

What US Apple chiefs think about one of their executives admitting things like this is not known...

The Massachusetts Department of Revenue has thrown a slight spanner into the works of the Boston MacWorld Expo. The Department has decided that any company selling goods at the show will be liable for collecting Massachusetts sales tax for the rest of the financial year.

This will provide major administrative headaches for many companies and at least one, the MacConnection division of PC Connection, a New Hampshire-based firm, has pulled out of the show because of the decision.

According to David Hall, executive vice president of PC Connection, the show wasn't worth the risk of being stuck with the sales tax liability.

OUTBOUND NOTEBOOK

Remember the Outbound laptop? You know, that's the Apple-approved, Mac-compatible machine which 'docks' to a Macintosh. Well, apparently Outbound is about to ship something called the 'Outbound Notebook System' in the next couple of weeks. This is a computer which provides full Mac compatibility in a notebook-sized case.

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Weighing around 6lb, the Outbound notebook is 11x8.5x2.5-inches in size when folded down, and can be configured to include both a standard 3.5-inch floppy drive and an internal hard disk of up to 60Mb – in direct contrast to Apple's new portable machine, expected in October, which will need an external floppy disk drive.

The notebook's mouse replacement is a new version of the company's IsoPoint device, called the TrackBar, and the display is likely to be a sidelit, 10-inch LCD.

Powered by the type of batteries normally found in portable camcorders, the notebook will be available in a number of different configurations, ranging from a 20MHz 68000 processor machine up to a full 33MHz 68030, and will be able to support a RAM disk of up to 60Mb in size. The price of the machine will start at around $2,899 and will go up to $4,299 for a 68030 machine with 60Mb hard disk.

Expect to see the new Outbound Notebook on sale in this country in about two months' time – full details of UK prices as soon as we get them.

CLARIS INTEGRATED SOFTWARE

Apple subsidiary Claris has announced the release of *ClarisWorks*, a new integrated software system which is targeted at first-time buyers of the Mac.

ClarisWorks features several integrated 'modules': a word processor, graphics module, spreadsheet, charting, database management and a comms unit. Unlike other 'integrated' packages, *ClarisWorks* doesn't force the user to switch between different modules to perform different tasks; instead, all tools are available from within the main document window.

Because the modules within the program are based on Claris' own programs such as *MacWrite*, *MacDraw*, *Resolve* (the spreadsheet) and *FileMaker* (the database), *ClarisWorks* is an ideal first buy for people who can then upgrade to the fully functioned programs if they wish.

The suggested retail price for the package is £195; in addition, owners of Microsoft *Works*, Symantec *GreatWorks* and *RagTime* can 'upgrade' to *ClarisWorks* for £80.

☎ Claris is on 0800 929005.

PRODUCT NEWS

● Altsys has announced that *Fontographer 3.3* is now shipping.

The new version of the program has been upgraded to include the ability to read and write TrueType fonts for the Mac and PC (at least, for PCs running Windows 3.1, which will have TrueType support but which was supposed to have been released in January).

Fontographer is virtually an industry-standard font creation package, so the inclusion of TrueType support is vital if the program is to maintain its position in the market.

☎ For further details contact Softline Distribution on 081-642 4242.

● Microsoft has announced a product called *Microsoft Project*, which is 'a powerful and flexible graphical tool for managing project schedules, tasks, budgets and resources.' Nope, I don't know what that means either, but if your eyes lit up when you read the quote the you'll be pleased to hear that the program will be available 'in August' at the suggested retail price is £495.

☎ Microsoft is on 0734 500741.

Ian Wrigley

POSTCARD FROM AMERICA

The original Macintosh bundle came with a handful of little utility programs called 'Desk Accessories', available only through the Apple menu. System 7 has almost done away with DAs, so that any file or application can now be put under the apple. Other new types of small, but useful programs, Control Panel Devices (CDEV) and Extensions (formerly INIT), have become popular as the Mac has grown up. The Map Control Panel is a good example.

Even modest programs have hidden features. Here's more than you ever wanted to know about the Map.

● The standard Map is black and white, but colour machines were not forgotten. In the System 7 Scrapbook is a colour PICT of a world map which was specifically designed to replace the standard map. In fact, any PICT can be pasted in—Mickey Mouse or X-rated naughty bits can become your home town.

● If you're having trouble seeing your place on the map, try holding down the Option when opening the program to get a zoom view. The Option + Shift key moves down even closer to ground level. Holding down the mouse button while crossing a city will list its name.

● Holding down the Option key while clicking on the Find button scrolls through the cities alphabetically. Try finding the place 'Middle' for a cute surprise.

● Clicking on the words 'Time Zone' will change to 'Time Difference'. Map will show you the difference in hours, and the actual time there. You can use the 'Set' command to fool your Macintosh into believing it's in another time zone.

● There was quite a stink on the InterNet about what municipalities were left off the Map list. Fortunately, any city can be added to the program. Edinburgh, Cardiff, London, and Dublin are found in the US version.

David Morgenstern

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All Sega Game Gear Games	£22.00

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Nintendo Gameboy	£45.00
Lightboy (clip-on light)	£19.00
Hard Carrying Case (carries Gameboy & 4 game carts)	£14.00

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All STE Ram Kits come with instructions and DO NOT require soldering in most machines.

8833 MKII

Colour Monitor

The Philips 8833 MkII is the perfect colour monitor for ST and Amiga owners. With its stereo sound and super quality picture it really shows off the full capabilities of the STE and the Amiga. The Philips 8833 MkII also comes with 12 months on site warranty FREE!

8833 with STFM cable	£249.99
8833 with STE cable	£249.99
8833 with Amiga cable	£249.99

Or even better ....

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ATARI STE TURBO. consists of Standard Pack and STOS, Hyperpaint II, Music Maker II, First Basic and 8 games (Indiana Jones, Dragons Breath, Blood Money, Impossible Mission II, HKM, Anarchy, Outrun and Supercycle).	£309.00	£339.00	£369.00	£449.00
ATARI STE TENSTAR. consists of Standard Pack and Asterix, Chess Player 2150, Drivin Force, Live + Let Die, Onslaught, Pipemania, Rick Dangerous, Rock n Roll, Skweek and Trivial Pursuit II.	£309.00	£339.00	£369.00	£449.00
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ATARI STE KUMA BUSINESS. consists of Standard Pack and word processor K-Word 2 (incl. K-Spell Checker), K-Database, K-Spreadsheet, K-Graph business graphics and Metacomco Basic language.	£319.00	£349.00	£379.00	£459.00
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AMIGA A1500 SOFTWARE consists of the A1500 Base Pack and the following great software Platinum Works, D Paint 3, Populous, Simm City, Battle Chess, Their Finest Hour (Battle of Britain) and 2 books - A-Z of Computer Jargon and Getting the most from your Amiga.	£655.00

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WHOLE WIRED WORLD

Off the wire this week, Steve Gold reports on the long awaited Atari control panel, Aussies who think CDTV is fair dinkum, an adaptor to link your PC to your ST, and promising new add-ons for the video toaster

AMIGA HAILED A SUCCESS `DOWN UNDER'

The Commodore Amiga continues to gain the edge on the Atari ST. Reports just in from Australia, suggest that the World of Amiga show, held in Sydney in late July, was a great success, with almost 30,000 paying bodies walking through the doors.

In contrast, the last New York World of Amiga show only had 19,000 visitors. One reason for the record turn-out by the Aussies may have been the fact that this show marked the debut of the CDTV system in Australia.

Talking of which, what is happening with the CDTV? Chatting with Paul Fletcher of the European Multimedia Centre in London (071-387 2233) recently, I discovered that Commodore UK is working quietly on the CDTV, with a major push planned this Autumn.

The EMC is involved, since it dedicated to promoting multimedia computing, a category which the Amiga CDTV falls neatly into. Watch this space.

• Interest in the CDTV may explain the success of the World of Amiga show in Sydney, Australia, which attracted some 30,000 people. Meanwhile, back in Pommieland, a major push for the CDTV is expected this Autumn

ISRAEL LOSES ATARI CONTRACT

It looks like Atari has put the stoppers on plans to build a $53 million computer manufacturing facility in Israel. According to a fax sent from Atari to Zvi Koren, the head of Israel's Trade and Industry Ministry, Atari has zapped the project, blaming Israel's foot-dragging.

In the fax, Atari claims that it told the Trade and Industry Ministry on 28 June that it needed a reply no later than 21 July. Since the reply never arrived, Atari said it was withdrawing the proposal.

For their part, Israeli ministry officials claim that Atari's formal request for the investment arrived on 16 July, and that a ministry commission had intended to meet in late July. They expressed hope that Atari would reverse its decision. All the signs, however, point to the project being cancelled.

This leaves Atari with only limited production of its machines, with the bulk of manufacturing contracted out to third-party companies. Contracting out is a financially efficient method of production – Amstrad contracted out in its early days of PC production – but it does mean that a company is at the mercy of the contractor. If sales skyrocket, arranging for extra machines to meet demand can prove tricky.

CONTROL PANEL FOR ST AND TT

After several months of rumours and promises, Atari has finally released its new control panel for the ST and TT machines to the public in the US. First reports suggest that the new graphics front-end for the ST/TT series is well worth the wait.

When the rumours about the new control panel started late last year, many in the industry thought that it would only work with the TT's and Mega STE's, but according to an Atari representative, "It will work on all ST, Mega, Stacy, STE, Mega STE and TT systems".

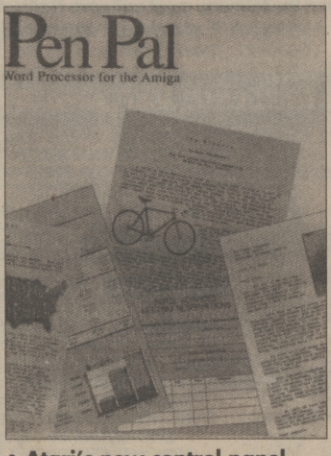
Basically, the principle seems to be, if it's TOS driven, the computer will run the new control panel. So what is the new control panel? Depending on where you first heard about it, the new control panel comes under several names – the new control panel, X-control, and the extended control panel. Despite these working names, its official title, in Atari circles at least, is the `extensible control panel' or ECP for short.

The ECP is a replacement for the old control panel seen on the ST. Like the first control panel, the ECP it allows users to configure the ST's systems – double-click rate, key repeat rate, colours, printers, modems, etc.

What makes the ECP different, says Atari US, is that it loads in individual CPX program modules as it needs them. This cuts down on the amount of memory required for each different function.

This enables users to customise the ECP for their own use. Several versions of the ECP can be placed on disk, for use in different situations. For instance, where RAM is tight, a bare bones ECP can be loaded. When running a simple program, the full ECP suite of software – essentially a Borland Sidekick range on the ST – can be loaded.

So when will we see the ECP in the UK? Sources suggest later this year. In the meantime, take an comms stroll around your favourite on-line system or BBS. If the system has an Atari area, chances are that you'll be able to download the new ECP from it.



• Atari's new control panel (ECP) works with both the TT (above) and the STE

Z-KEYS ADAPTOR FOR PC

Zubair Interfaces has announced an adaptor for the ST – it's called Z-keys and enables almost any PC keyboard to be used with almost any Atari ST.

The $99.95 adaptor is said to be relatively easy to fit, and plugs in under the 520 or 1040 ST's existing keyboard, leaving a trailing keyboard adaptor port. The PC keyboard can then be plugged in as usual. If you have a Mega ST or STE, a further extender cable is needed – this adds $20 to the kit price.

While it's fair to say that the US marketplace has a number of keyboard kits for the ST, this is the first one that I've come across that allows your own choice of PC keyboard to be used. So when's a version coming out for the Commodore Amiga then? Soon, the company says. Contact: Zubair Interfaces Inc., 5243B Paramount Boulevard., Lakewood, CA 90712, United States. Tel: 0101-213-408-6715

ATARI PORTFOLIO FORUM DEBUT

At long last, the Atari Portfolio has its own area on the Compuserve on-line information service. The area, which opened at the end of July, is called the Palmtop Forum, and includes interactive messaging and a growing number of program files for the increasingly popular Atari pocket-book PC.

The main topic at the time of writing seems to be how to maximise data storage on the Portfolio. Several programs available for download help users make the most of the RAM. and RAM cards they have. If you have a modem, the Compuserve Palmtop Forum is well worth checking out.

Further details of Compuserve on 0800 289458 (voice).

TOASTER OF THE TOWN

Newtek, the developers of the Video Toaster for the Amiga, has previewed version 2.0 of the driver software for the add-on graphics unit. First reports suggest that the software greatly enhances the capabilities of the unit.

Newtek's Video Toaster is actually a video controller board for the Amiga that allows the computer to simulate professional quality video effects. With version 2.0 of its software, Newtek has added several new transitional effects to its switcher, including animated effects such as turning gears and disco effects such as smoke and clouds.

Newtek is shipping the Video Toaster workstation in two versions – version 1.0, at $3,995, comes with an Amiga 2000 equipped with 5Mb of RAM and a 50Mb hard drive. Version 2.0, meanwhile, costs $8,995, and comes with an Amiga fitted with a 50MHz 68030 microprocessor and maths co-processor, along with 9Mb of RAM and a 105Mb hard drive.

Contact: Newtek, 215 SE Eighth Street, Topeka, KS 66603, United States. Tel: 0101-913-354-1146. ■

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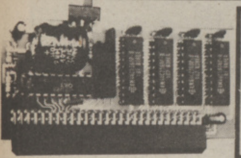

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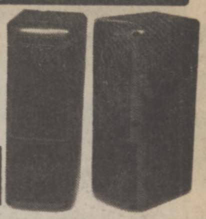

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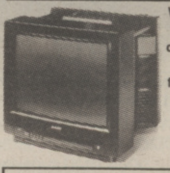

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FULLY EQUIPPED

Mary Branscombe reports on CASE tools for single users, cut price utilities, GFA-BASIC for Windows, and protecting your programs from nosy users

CASE tools (that's Computer Aided Software Engineering) can make programming a whole lot easier, but most CASE tools are designed for groups of programmers working on a network of workstations – and they're usually very expensive to boot, often costing £6,000 and upwards.

Personal-Select/SSADM from Select Software is considerably cheaper than that, although it's still quite pricey at £495. It's a single-user CASE tool for the PC, because not everyone writes their programs in a group.

Personal-Select/SSADM supports version 3 (as well as the newly agreed version 4) of SSADM – the Structured Software Analysis and Design Methodology which is used in government defence projects.

It stores the design for your program and uses techniques from knowledge-based systems to check that the code you write later actually matches up with your original design for the program. Contact Select Software on 0242 226553.

LOW COST HISOFT

HiSoft is reducing the prices of current versions of DevpacST 2, BASIC version 1 and the Harlekin utilities, all for the Atari ST and STE, to £39.95 each, in order to clear stocks before they release new versions of the products.

The Devpac 68000 assembler/disassembler is reduced from £59.95. Version 3 of Devpac is due for release in September this year, with a new editor, an improved debugger and a faster assembler with more switches. It will cost £69.95 and upgrades will be £34.95.

BASIC Version 2 should be out soon for £79.95, with a multi-window editor, a debugger and a high-level GEM toolkit.

A new version of HighSpeed Pascal follows hot on the heels on the original release. Version 1.13 of the compiler includes an in-line 6800 assembler for incorporating assembly language and support for a 68881 maths co-processor. Details from HiSoft on 0525 718181.

DOWN TO BASICS

Another version of BASIC for developing Windows applications – GFA-BASIC Windows includes everything you need to write Windows applications so you won't need the Microsoft Software Developers Kit. You can access over 500 Windows System calls and use the Clipboard, Dynamic Data Exchange between Windows applications and Dynamic Link Libraries that make code available to different programs.

GFA-BASIC Windows is syntax compatible with GFA-BASIC for MS-DOS, Amiga and ST and it costs £200. Talk to GFA on 0734 794941.

PROTECT YOUR CODE

If you don't want other users to copy your programs or you want to put out an evaluation version that can only be used a few times, you need Everkey II. The Everkey II plugs into the parallel port on a PC and protects any .EXE or .COM file. Your original code can't be disassembled either.

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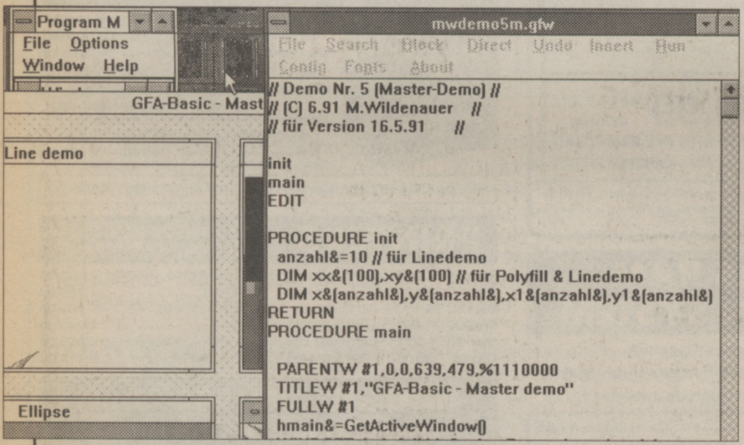

```
// Demo Nr. 5 (Master-Demo) //
// (C) 6.91 M.Wildenauer   //
// für Version 16.5.91     //

init
main
EDIT

PROCEDURE init
  anzahl&=10 // für Linedemo
  DIM xx&(100),xy&(100) // für Polyfill & Linedemo
  DIM x&(anzahl&),y&(anzahl&),x1&(anzahl&),y1&(anzahl&)
RETURN
PROCEDURE main

  PARENTW #1,0,0,639,479,%1110000
  TITLEW #1,"GFA-Basic - Master demo"
  FULLW #1
  hmain&=GetActiveWindow()
```

• GFA-BASIC for Windows has powerful graphics functions and dispenses with the need for the Microsoft Software Developers Kit. It also gives you access to over 500 Windows System calls

NOW WE ARE SIX

Microsoft has completely rewritten version 6 of its Macro Assembler to the point where the assembler can now invoke the linker directly, so your source files go straight into executable files. The old full-screen editor has been replaced by the Programmer's WorkBench, an integrated environment for editing, assembling, debugging and linking that's becoming standard on Microsoft languages.

To help you look through your files, there's a source browser, and the Advisor on-line help system is very welcome – no more leafing through enormous manuals and you can even add your own help screens to the system.

The assembler itself has two new data types, Union and Typedef, for declaring your own types. The high level commands like .REPEAT and .UNTIL are now converted directly into tests on registers and the associated jump labels, which is one of the features that makes the assembler so much faster than before. The n-pass method of assembly also speeds things up.

C programmers who use some assembler – and vice versa – will like MASM 6 because the H2INC program included converts C header files to assembler include files, so you can use just one header and convert to the relevant format. That's one less tedious job to do yourself.

The new INVOKE command makes it easier to call external procedures, written in any high level language, making sure that the order of parameters on the stack is correct for that language.

As well as making your code faster, MASM 6 makes it more compact. All the initialisation required for a DOS startup sequence is in the .STARTUP command, which cuts out a good deal of code and there's a corresponding .EXIT command as well.

MASM 6 costs £105 from Microsoft on 0734 391123.

OVER TO YOU

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New Computer Express,
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ALL ABOUT AMIGA GRAPHICS

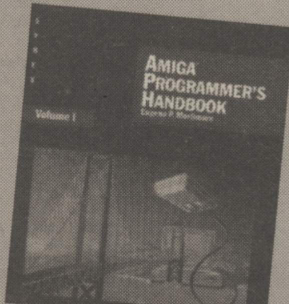
Amiga Programmer's Handbook • Eugene P Mortimore • ISBN 0-89588-367-8 • Pitmans • £24.95

This is a reference manual covering the Amiga ROM kernel facilities for graphics and animation. Just opening the front cover gives you a good idea of its no-nonsense approach. Instead of credits or adverts for other books by the author, the first and last two pages in the book are crammed with an index to a selection of the functions and macros covered in the book, complete with parameters and asterisks to mark which are macros and which return a value.

This is a reference book rather than a programming guide and you could use it with any compiled Amiga language from assembly language or C to Pascal. Because it's not language specific, there is very little code in the book. It's functional rather than illustrative, giving you programming templates for all the Amiga's video display modes. If you want more code, four C programs are available on a separate disk.

Each entry covers one of the functions in the five libraries that control Amiga graphics – the Exec library, the Layers library, the Intuition library, the Icon library and, of course, the Graphics library itself.

As well as giving you the structure and explaining the syntax, there's a full discussion of how each function works and what you can do with it. If you want to use the Amiga's graphics capabilities, the *Amiga Progammer's Handbook* shows you everything that's on offer.



• Amiga Programmer's Handbook – everything you need to know about Amiga graphics from gadgets to virtual sprites

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TECH TIPS

Keith Pomfret says *Kindwords* can work; ties a printer ribbon round an old Juki; links up with a computer downunder and tackles a Demon modem

Partition bugs

Could you help me with a wee problem or two? Problem one is that I am an Amiga user running an A590 hard disk and a KCS PC Power Board. The hard disk is partitioned 10Mb AmigaDOS and 10Mb MS-DOS. The problem is that when I run *Kindwords 2.0* be it from disk or hard disk the Amiga returns the error: 'Unit 6 is not a DOS disk'. Is this curable?

Also, is it possible to slow an Amiga down to 50 baud so that it could accept Murray Code from a Teleprinter? I bet you've never been asked that question before?

Joe Watling, Sutton

WHAT *KINDWORDS* is doing is acknowledging that the IBM partition on the A590 is there and that it is not AmigaDOS compatible. You don't mention whether *Kindwords* fails to work after the error message comes up, so it just seems to be an inconvenience more than anything else.

As far as fixing it goes, try looking in the KCS manual to see if there is a mounting command that can be put in the startup-sequence to make the Amiga recognise the PC partition.

As for your second question, it is indeed possible to slow the Amiga down to 50 baud. Because you are reading data from the teleprinter I presume you would be hooking the Amiga up to it through the serial port.

The Amiga serial port can read data at speeds as slow as 50 baud. A communications program could be used for the job, but 50 baud might be a bit too slow for their settings.

A better bet might be to contact an amateur radio club that uses computers. One such club is the Commodore Radio Users Group, 69 Irvine Drive, North Clippens, Linwood, Paisley. It might be able to help get the Amiga to understand the Murray Code as well.

Non-DOS message

I have an Amstrad PC2386 with a 65Mb hard drive. Although the computer is perfectly alright and the hard drive doesn't seem to have any problems, when I CHKDSK on the hard drive it comes up with: 'Probable Non-DOS Disk. Continue Y/N?'

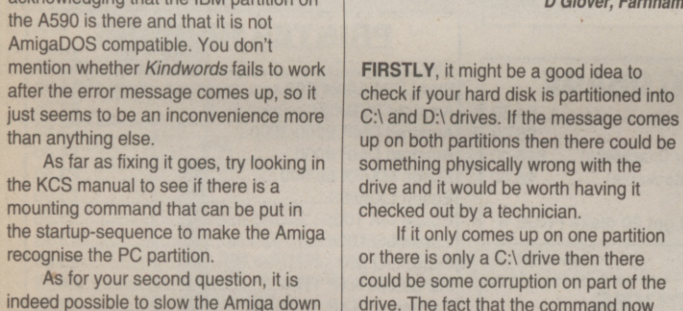
If I press 'Y' it works perfectly and checks the disk, but it didn't use to do it. It has only started recently and I am concerned there is a problem with my hard disk and I wish to resolve it before something goes seriously wrong.

D Glover, Farnham

FIRSTLY, it might be a good idea to check if your hard disk is partitioned into C:\ and D:\ drives. If the message comes up on both partitions then there could be something physically wrong with the drive and it would be worth having it checked out by a technician.

If it only comes up on one partition or there is only a C:\ drive then there could be some corruption on part of the drive. The fact that the command now checks the disk whereas it didn't before may mean that it has cleaned up the disk itself. Keep an eye on what it does though.

Just for safety it might be worth checking the disk for viruses, as this is the sort of thing they might do. This isn't just scaremongering as there is a possibility the drive could have been infected by a rogue disk. Anyway, it's always a good idea to check both floppy and hard disks for viruses on a regular basis. Virus checkers are available from most Public Domain libraries.



• Hopefully, making the Amiga recognise an IBM partition on the A590 hard drive shouldn't be an insurmountable problem

Torch lighted

I am a student doing a City & Guilds 425 Level 3 Certificate in Applications Programming in Cobol with Kalamazoo.

I have just recently bought a Torch Graduate (remember this?) model 4800/2 for my BBC. Basically it's an 8088, 256K RAM, 2 x 360K 5.25-inch Epson drives, integral PSU and two 8-bit IBM slots. I am running *DOS 3.1* on it and it runs via the Beeb using its display and keyboard.

However, I did not receive any of the original Torch manuals nor the original software for it. Do you know anyone who uses one or a Torch user's club?

Also, what is the maximum memory I can upgrade it to? Can I directly attach an IBM 102 key XT keyboard, 5-pin din socket, to it or via some unit, as not all the keys on the Beeb act as those on an IBM.

What are its limitations? Will it run all IBM software eg, Windows, Desqview, DR-DOS 5, *Pagemaker*, *Corel DRAW*? Can I expand it? What is extended vs expanded memory? What are accelerator boards? Can I upgrade the 8088 or should I get another motherboard?

I am quite fond of my Beeb and do not want to sell it. However, your suggestions/advice would be most grateful. Any help of any sort would be appreciated. Perhaps you could print my 'phone number so someone reading may help: 021-784 2405. I have tried other places, but to no avail.

Waseem Haq, Birmingham

AS THE TORCH GRADUATE stands 256K was fine for the most basic of tasks when it came out (sometime in the mid '80s). Now, however, 640K is regarded as the minimum amount of RAM in all PCs and even this is a bit limiting. I don't know whether the Torch can be expanded any further, but I would say it probably could be, although not further than 640K.

Unless there is a 5-pin din socket, I doubt whether a keyboard could be automatically connected to your machine, but again, it could be possible. The problem would be getting the computer to recognise all 102 keys – if the BBC hardware can't do it itself, then an external keyboard may just replicate the Beeb's own keys and functions.

When the Torch came out, an 8088 processor with 256K was, as I mentioned earlier, an acceptable and usable hardware configuration. Nowadays though, an 80286 is almost regarded as the minimum set-up to have. Applications such as Windows, Desqview and DR-DOS would have problems running on an 8088 processor, as it is not powerful enough to handle operating systems, for instance, that feature multi-tasking. It is possible to get Windows running on an 8088, but it really is sluggish and virtually unusable. And if you're thinking about running these with 256K then think again - 1Mb is more the amount you should be looking at.

There is some hope though. You could replace the 8088 with an NEC V20 or V30 processor which would increase the speed of the 8088 from a mere 4.77MHz to a more respectable 8 or 10MHz. Then applications such as Windows would be less sluggish, but you'd still have the memory problem.

An accelerator board could be used in one of the 8-bit sockets, presumably, but the cost of buying one could be almost as much as getting a separate low-end PC compatible. Then you could use the Beeb and the PC for the things that they were really made for.

As far as user groups go which might be able to help, you could try Beebug, a BBC user group, by writing to: 117 Hatfield Road, St Albans, Herts AL1 4JS. Or if it can't help, you could try the British Association of Computer Clubs to find a club that might be able to help. It can be reached at: Banc Y Rhosyn, 14 Bron Y Glyn, Bronwydd Arms, Carmarthen SA33 6JB. Unfortunately we have no records of a Torch user group.

Ribbons located

I am replying to your letter in issue 143 regarding the Juki 6100 Daisywheel Printer. Your reader, Mr Simon Hodgkins has been trying to obtain ribbons for this printer.

Various makes of ribbon have been used in my printer for a number of years, but the one that seems to be around at the moment in quantity is IBM type 1299095. In fact, recently I picked up a dozen or so from a market stall for 50p each, which can't be bad.

However, there are three types in all as follows: multistrike, singlestrike and correctable. The multistrike one is the only one suitable for re-inking as the rest are a plastic type ribbon. Your reader will be able to obtain them from Diamond Computers, Manchester 061-257 3999 or

Wilding Office Supplies. They are a very common ribbon and were also used in quite a few typewriters.

I am hoping that one of your readers may be able to help me too! I am trying to obtain a manual for a Juki 6100. Juki seems to have vanished completely. I have not seen any of its products for years. Has it gone bust or has it been bought? Does anyone know? Perhaps someone may have a 'phone number. My address is 6, Levant House, Mile End Road, London E1 4RB.

Terry Martini, London

THANKS FOR THE TIP. Can anyone supply a manual? As for Juki, I'm not sure where it's gone.

Drive time

Would you please inform me as to whether it is possible to use either a PC double-sided disk drive or PD HD disk drive (with HD module of course) as a second drive on my Atari STE, and also whether PC hard drives will work with it.

I am also considering the purchase of an Atari SM124 monitor. However, I am very unhappy with it's appallingly small size. Are there any larger alternatives at all to Atari's inadequate offering in the high resolution area? For example, can a VGA monitor (or similar) be made to work with an STE?

I .Spake, Feltham

THE STE'S disk format is based on the same format of the PC so it should be possible to use either a 5.25 or 3.5-inch PC disk drive on an ST. The main thing is to get the details of the interface or cable from the drive as these will no doubt vary between products, and then match these up with the pins on the STE's external disk drive port. A couple of points to watch out for are whether the drives have their own power supply or not, as they may need more power than the STE can supply.

Unfortunately the PC hard drive isn't compatible with the ST so you would probably be better off selling it and using the money to buy an Atari hard drive.

• Just because the Atari ST's disk format can read PC disks, does that mean PC drives can be used by the ST?

The Atari SM124 does have a small screen size and as yet I don't think Atari has released a larger version.

As for connecting a VGA monitor to the ST, a special cable is needed.

Worldly transfers

Two problems for you and your readers.

First, how can I best get my computer and that of my brother in New Zealand to pass information to each other? We are both researching the history of our family and our separate databases are getting quite large. I have an Atari STE and he has a BBC Model B. Do you know of any programs which would enable us each to produce disks which the other's computer could read? Disk size is not problem as we both have 5.25-inch disk drives.

Someone has suggested that a program called *BeebDOS* would enable the Beeb to read from MS-DOS formatted disks and I have no problem turning my data into ASCII files and placing them on MS-DOS formatted disks. (I assume *BeebDOS* would also allow the Beeb to write to MS-DOS formatted disks?). Is this the method you would recommend and do you know where we can obtain a copy of *BeebDOS*?

Secondly, why does the beautiful artwork I produce on the SM124 monitor come out slightly elongated when I print it out (Alt-Help) on my 9-pin LC10 (the install printer option is set at 960)? Is there any way that I can get a more true-to-scale print-out?

Bob Holland, Croydon

CONVERTING THE DATA to a PC formatted disk does seem to be the way to go. Because the databases would presumably produce files that carry headers etc, specific to the application, that data would have to be converted to ASCII to be used by the antipodean machine.

BeebDOS sounds as if it could do the job but I don't know where to get a copy of it from. Perhaps you could try a BBC users group.

An alternative method of transferring the data would be for you to send each other your own computer's disks, and then you both could transfer the data across using a null modem cable and a comms package. Or you could transfer the data to each other over the phone line using a modem, or upload it to a BBS. This would require a modem though and the phone bill would be prohibitive, but it would be a faster way of doing things.

The printing problem could be the printer driver you are using. Star's LC-10 is capable of basic Epson emulation but you could try and get hold of a driver specifically for the printer. You could also try printing out through another type of printing program or art package.

Modem mayhem

Some time ago I picked up a modem for the BBC Micro at a local radio and electronics rally. Unfortunately, it was without instructions or documentation of any kind.

The unit itself is a cream-coloured plastic box, with a red front on it bearing the name DEMON (presumably the manufacturer?) along with five green LEDs and three push switches. Three cables emerge from the back, namely mains, telephone and RS-423. The associated software came on a ROM chip, which I am using on a ROM cartridge on a Master 128.

The unit doesn't seem to get any sense out of it, or the software. Therefore, I would be extremely grateful if anybody can give me any information which may help me to get the thing working! If somebody has an instruction manual for a unit such as mine, which they could let me have a photocopy of, then I would be more than willing to pay any copying/postage costs involved.

Incidentally, when I tried ringing the London 'phone number printed in the front of the unit, all I got was a carrier tone! Not much good without a working modem!

Gareth Hughes, Clwyd

BECAUSE the modem has three switches along the front that may indicate that it isn't an automatic modem. Is there a socket in the back of the modem for a telephone? If there is then you might be able to plug a 'phone in, dial the BBS numbers on the phone itself, then press an 'on-line' button on the modem to get a connection.

Of course, this depends on whether or not the computer and the modem are communicating to each other in the first place. When everything is connected and the software is running, do any of the LEDs flash or flicker when you press a key. If they don't then the cable may be at fault.

Other than those basic tips I can't help much further. Give Modem Marketing a call as it markets the Demon modems. Modem Marketing can be reached on 0780 470047. ■

Got those 1541 blues?

In the *Express* office this week we got a call from a distressed reader who couldn't get her Commodore 64's 1541 disk drive to write to any disks. It could read the disks alright, but there was no way it could format or write data to them.

To try and fix the problem the reader replaced several chips in the 1541, including the 6502 processor and the CIA chips, but to no avail. Obviously she had gone to a lot of expense to try and get things working properly, but now she's really stumped.

The only other option seems to be to see if the read/write head is out of alignment or needs cleaning. In order to align the head it would be best to take it to a technician. It is possible to do it oneself but it is quite a delicate operation. Cleaning the head involves removing the case of the drive and lightly using a drop of alcohol to remove the dirt that will no doubt be there. Somehow I think the problem is more than just a dirty head but you never know.

• Got a Commodore 64 which can't read disks? Perhaps the read/write head is out of alignment or needs cleaning

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GLOBAL PUBLIC DOMAIN – Amiga PD only 89p. For catalogue write to PO Box 2039, London E13 9PF. Every month free competition to win PD games and other accessories for your Amiga. We also swap PD.

GOODMAN PDL – 16 Conrad Close, Meir Hay Estate, Longton, Stoke-on-Trent, Staffs ST3 1SW. Tel: 0782 335650.

GUNNING PD PD – Atari ST PD library. Disks only £1 each and supplied on branded disks. Send three first class stamps to 47 Auchingane, The Tryst, Edinburgh, EH10 7HX for disk catalogue. Wow!

H

HIGH TECH SEQENCING PDL – 20 South Lane, Shelf, Halifax, West Yorks HX3 7PN. Tel: 0274 606205.

I

IAN BLAIR ENTERPRISES – 78 Camarthen Road, Swansea SA1 1HS. Tel: 0792 649060.

IBM SHAREWARE CLUB – send blank disk for full list and details to 23 Houldsworth Rise, Arnold, Nottingham, NG5 8HZ.

IMAGE ART PD – Specialising in IMG format pics for DTP/other categories. No games!! Send £1.50 for catalogue and disk, rechargeable against purchase. 11 Ashleigh Point, Dacres Road, SE23 2XL. Tel: 081-291 4094.

IMG CLIP ART – GDOS fonts for sale or swap. For catalogue send blank disk plus stamped addressed envelope or £1 to E Renner, 62 Broxholme Lane, Doncaster.

J

JASSOFT PD – IBM PC PC software from 75p per disk. Send an SAE for free catalogue to: Jassoft PD, 25 Connaught Square, London W2 2HL.

JENNIX PD – Atari ST/STE Public Domain specialists. Over 400 disks from only 90p each. Send 50p for a disk list to Jennix, 66 Abbey Road, Strood, Kent.

JOEL'S PD GAMES – for Amiga users. PD disks only 90p each. For a catalogue send an SAE to Joel's PD Games, 389 Scalby Road, Newby, Scarborough, North Yorkshire, YO12 6TG. Please add a blank disk.

L

LAPD – Worldwide reputation for quality PD for the ST. Thousands of programs available. Disk catalogue only £1.00. Credit cards accepted. Telephone 0773 605010 or 0773 761944.

LAZER PD – 100 Amiga PD disks, 95p each. For catalogue/disk sent 95p (cheques/PO's payable to J Deavall) to: 57 Adamthwaite Drive, Blythe Bridge ST11 9HL.

LIGHTENING SOFTWARE PD CLUB – We can provide PD titles free of charge! Amiga only. For details send an SAE to Brian Roscoe, 14 Kingsmead Road, Moreton, Wirral L46 1QU.

M

MACH MAC PD – The best there is. Explosively good public domain for the macintosh. £1 for demo disk and catalogue of over 900 disks. Write to MMPD, Highover, Udimore, Nr Rye, East Sussex.

MERTON PD – Cheap Atari ST PD. Send £1 or blank disk for catalogue with SAE (cheques payable to T Huq) to: 10 Grasmere Avenue, London SW19 3DX.

MG SOFTWARE – Atari St Public Domain only 65p and £1. Send two first class stamps for free catalogue to: MG Software, Cornerways, Beckingham Street, Tolleshunt Major, Essex CM9 8LL.

MPH – 10 Chandlers Court, Eaton, Norwich NR4 6EX

MT Software – Greensward House, The Broadway, Totland, Isle of Wight PO39 OXB. Tel: 0983 756056.

MY PD – Over 1200 disks at 99p each. For Amiga catalogue disk send 80p PO or cheque to Jagla, 92 Firtrees, Thurgoland, Sheffield S30 7BG. Tel 0742 884183.

N

NBS – Dept F, 132 Gunville Road, Newport, Isle of Wight PO30 5LH. Tel: 0983 821983.

Nighshift PD library – Clip Art, demos, exclusive samples, utilities, Atari ST. Send SAE and 50p for catalogue to Nightshift, 8 Bertelin Road, Beaconside, Stafford ST16 3JJ.

NO FUSS SHAREWARE – For PC. Prices from £1. Contact: NFS, 48 King William Drive, Cheltenham, Glos. GL53 7RP. Prestel 01-111 5474.

P

PAD PD AND SHAREWARE LIBRARY – For the Amiga user. Send SAE for details to: PAD Public Domain Library, 41a Saint Augustine Street, Norwich, Norfolk, NR3 3HF.

PAGE 6 PUBLISHING – PO Box 54, Stafford, ST16 1DR. Tel: 0785 213928.

Paradise Computers – 9 Westfield Cres, Brighton BN1 8JB.

PAWS PD – Lichfields only PD library. All disks £1 each. Swaps welcome. Send a stamped addressed envelope for list to: Anthony Cooper, 14 Purcell Ave, Lichfield, Staffs WS13 7PJ.

PERSPECTIVE PD – Free Amiga PD! Don't believe us? Try! Send 25p for a printed catalogue or 60p for disk catalogue. 6 Clover Close, Cumnor Hill, Oxford OX2 9JH.

PC SHAREWARE – At sensible prices. 50p to £1.50 per disk. Send disk with SAE to Rosie, 63 Springboig Road, Glasgow G32 0DB

PC-PD SHAREWARE – All disks £1.50. Postage £1 per order to PC-PD, GMC Computers, The Green, Cavendish, Suffolk, CO10. Tel 0787 280 526. Credit cards accepted.

PC SOFTWARE – PC Serve, 1147 Greenford Rd, Greenford, Middx UB6 ODP. Tel 081-864 2611, BBS 081-864 2633

PCW PD CLUB – It's new, it's fresh. Swap PD for PD, up to three disks full at a time. Bi-monthly newsletter soon. All PCW owners welcome. Write to 3 Moorend Ave, Chorley Wood, Birmingham, B37 5SD.

PD ESSENTIALS – 22 Fern Avenue, Mitcham, Surrey CR4 1LS.

PDQ – PO Box 38, Eastleigh, Hants SO5 5WR.

PD ST – PD Disks from £1. Disk based catalogue 50p. Quote NCE for special discounts. Send to PDST, 95 Elton Road, Sandbach, Cheshire CW11 9NF.

PD-X AMIGA PD – FROM 50p. Are you tired of over priced PD? Send an SAE to PD-X, 48 Sedgebrook Grove, Hull, HU7 5EB and we will send you a catalogue. Send SAE and a disk for a free demo. Good quality Empire/UMS Data disks £3

PERFORMANCE PD – PD for the ST. 30 Prospect Road, Oulton Broad, Lowestoft, Suffolk, NR32 3PT. Tel: 0502 513923. Disk list £1. Cheques/POs payable to Performance PD.

PJ DEMOS – Amiga PD. For just 30p send a disk for our catalogue. Only SAE will be returned. Send to PJ's Demos, 63 Park Lane East, Hull HU4 6TW.

POWER PD – 90p per disk. Wide range. Send 90p for current Amiga catalogue on 3.5 inch disk to Chris Jackman, 3 Albion Terrace, Lexham Road, Litcham, Kings Lynn, Norfolk, PE32 2QQ.

POTENTIAL PD – for the Atari ST. Public domain to sell and swap. SAE to Helenville, School Road,

PD LISTING

SPOTLIGHT ON YOUR FANZINES

Since we asked you to send in your fanzines back in issue 139 we have received a steady stream of A4 envelopes containing your very own publishing masterpieces.

Some have been very impressive; issue one of *Console Crazy*, for example, is excellent fun and we can highly recommend it, but the makers have asked us to not feature it in Spotlight until issue two which they promise will be an absolute corker. Well, we couldn't wait so here's a tip to all console owners – send a cheque or PO to Dave Rawcliffe, *Console Crazy*, 28 Watergate Lane, Woolton, Liverpool. (Don't worry Dave, we'll do a full blown Spot on issue two with pics when the time comes).

But we still want to see some more, especially diskzines! And just to entice you a bit more, there are some prizes up for grabs for the ones that impress us the most – y'know, games, utilities and other stuff that we find lying around the office that we don't want.

So editors, send in your wares. You never know, it might be the start of something big!.

Coldingham, Berwickshire TD14 5NS.

PRESTIGE AMIGA GAMES (UK) – Amiga Games for sale or exchange. Large PD Library. Send SAE for full list to K Harvey, 67 Waverly Road, South Benfleet, Essex SS7 4AX.

PRIVATE COLLECTOR – Atari STE Public Domain. Over 300 titles. Send blank disk (or 50p) and SAE for list to: N Rodel, 72 Lancelot Avenue, Stroud, Kent.

PRIVATE SHAREWARE – Send blank disk and stamp for catalogue. Very Cheap. Write to Frank, Combe Rise, Luppitt, Devon, EX14 0RT. IBM only. Telephone 0404 891806.

PROPHECY PDL – Atari ST Public Domain. Send SAE and disk or a cheque for £4.50 to Prophecy PD, 390 Coulsdon Road, Old Coulsdon, Surrey, CRS 1EF. We have very competitive prices.

PUBLIC DOMINATOR PD ATARI – PO Box 801, Bishops Stortford, Herts CM23 3TZ. Tel: 0279 757692.

R

R&G PD – For cheap Amiga PD send SAE for list to R&G PD, 23 Melmount Gardens, Strabane, County Tyrone, Northern Ireland or send a disk for list and game. Also willing to swap.

RICHARDS PD LIBRARY – Support for Amiga PD. A massive range of demos, utilities, music, AMOS, Slideshows etc. Most disks £1.50. Some £2.50. All disks dispatched as soon as we receive the order.. 74 Cross Deep, Twickenham, Middx, TW1 4RB.

S

S&T PD for the ST. Large selection of PD from £1. Send £1 or a disk and 50p for a list. All prices include postage and packaging. Send cheque or PO to Simon Eve, S&T PD, 6 Crediton Road, London, NW10 3DU

SAINT JOHN'S SCHOOL LIBRARY PDL – Atari/ST PD software for sale or swap. Write to St John"s School Library PDL, c/o Mark Ash, 54 Beaconsfield Road, Sittingbourne, Kent. ME10 3BB or telephone 0795 425653 after 4pm.

SCOTBASE PDL ASSOCIATION – Affordable Shareware for PC users. Blank disk and SAE for catalogue and details to: Rosie, 63 Springboig Road, Glasgow G32 0DB.

SCOTSOFT INTERNATIONAL – For the ST. Send three first class stamps for disk catalogue to 47 Auchingane, The Tryst, Edinburgh, EH10 7HX. Disks supplied are branded.

SENLAC – 14 Oaklea Close, Old Roar Road, St Leonards on Sea, East Sussex TN37 7HB. Tel: 0424 753070.

SHAREWARE KING – 3,000 items of Shareware for PC, plus support, membership, plus discounts. SAE and blank disk for details to C Smith, 10 Penwood Close, Westbury, Wilts, BA13 3LW. Tel 0373 865263.

SHIELDSOFT PD – For the Amiga. Only 75p per disk. SAE for details to 13 Churton Road, Rhyl, Clwyd LL18 3NB. Three month update. Personal service. Helpline for BASIC programmers.

SKYFALL PD – For the Acorn Archimedes. Thw world's largest PDL for the Archimedes. Spring 1991 catalogue out now. Send an A5 SAE or £1 for our demo disk to Skyfall, PO Box 2220, Birmingham B43 5RZ.

SOFTVILLE PD – Unit 5, Stratfield Park, Elettra Avenue, Waterlooville, Hants PO7 7XN. Tel: 0705 266509.

SOLENT SOFTWARE – 53 Rufus Gardens, Totton, Hants SO4 3TA. Tel: 0703 868882.

THE SOURCE PD – For the Atari ST. Compacted demos disks. £1.50 each. Write to: The Source PD, 7 Shearwater Lane, Norton, Stockton, Cleveland TS20 1SH.

SPHINX SOFTWARE – Erw Fynydd, Carmel, LLanelli SA14 7SG.

ST CLUB – 9 Sutton Place, 49 Stoney Street, Nottingham NG1 1LX. Tel: 0602 410241.

ST PD COMPILATION DISKS – Send SAE for details or £2.50 per disk stating disk (numbers 1 to 5). Write to: A burns, 61 Coniston Road, Gunthorpe, Peterborough PE4 6UL.

THE ST ADVENTURER'S PD LIBRARY – PD for all ST users. Adventure, more adventure and even more adventure. Catalogue disk just 50p. Write to John R Barnsley, 32 Merrivale Road, Stafford, ST17 9EB.

STAR PD – Software for the Atari ST/STE. Hundreds of disks available. Send blank disk and SAE for free PD and disk based catalogue to Star PD, 1 Solva Road, Clase, Swansea, SA6 7NX.

STATE 808 PDL – For ST art, demos (good selection) and games!!! Very cheap!!! Just send an SAE and disk to: State 808, 3A Old Lanark Road, Charluke, ML8 4HW.

STEVE'S AMIGA PD – Catalogue disk. See demos, play games, usable virus killer and a PD catalogue. Send £1 plus 9x4 SAE to Mr S Fitch, 1 The Croft, Welwyn Garden City, Hertfordshire, AL7 4JY.

STOS/AMOS PDL – Sandra Sharkey, 25 Park Road, Wigan, Lancs WN6 7AA. Tel: 0942 495261.

STUPID FLOWER PD – new library for ST users. Send an SAE for a free catalogue to SFPD, 3 Read Mead, Glastonbury, Somerset BA6 8ON or call 0458 35027 and ask for Matt.

THE SURREY PD CLUB – Atari ST PD for only £1 per disk. Send an SAE to the Surrey PD Club, 25 Windmill Way, Reigate, Surrey RH2 0JB.

SWPD – PD software from 70p. Send SAE for free catalogue. Atari ST only. SWPD, 50 Coombe Lane, Torquay, Devon TQ2 8EA.

SYSTEM PUBLIC DOMAIN – Archimedes. For 4 megs of the best graphics, RISCOS APS, utils, !Drawfiles, sprites, games, music and samples send five formatted disks, an SAE and £1 to Highover, Udimore, Rye, East Sussex TN31 6BG. Cheques postal orders to Mr EJ Thomas.

T

TOTAL PD – for the ST. Send SAE for free catalogue to Total PD. 27 Stanmer Villas, Brighton, East Sussex, BN1 7HQ. We buy, sell and swap PD.

TOWER TOP PDL – The Coragen Corporation, 4 Cardigan Close, Bletchley, Milton Keynes MK3 7EJ.

TRIDENT PD – Exchange your unwanted PD disks with us free. Send SAE for details and list to Trident, 19 Dunley Gardens, Newtownabbey, Co Antri BT37 9HZ.

TRIPLE X – We are the only PD Library dedicated to ST Adult Software! £2 per disk. Write for your free catalogue, also other software available! Triple X, Babak Ghaxi, 3 Lansdowne, Carlton Drive, Putney, London SW15 2BY.

TRUST PD – 18 The Park, Southawram, Halifax, HX3 9QY. Tel: 0895 53521.

TYPECAST PDL – Catalogue issue two out now. PD, DTP, WP, art and clip art for Atari ST/STE. No games. Send disk and SAE for catalogue to 31 Hartfield Crescent, West Wickham, Kent BR4 9DW.

V

VENUS SHAREWARE – IBM Shareware: Amateur radio, technical, engineering, education, Windows utilities and more. Telephone 0252 837860 for your free catalogue.

W

WARPDRIVE – The best in Amiga PD. Send for free catalogue. Disks 89p, p&p 50p per order. 110 Burton Avenue, Balby, Doncaster DN4 8BB.

WEST COUNTRY PDL – ST Public Domain and shareware. Large library. Send stamped addressed envelope and blank disk or £1 for catalogue to PO Box 2, Lynton, North Devon, EX35 6BS.

WEST LONDON PDL – 8 Berkeley Road, Hillingdon, Middlesex UB10 9DU. Tel: 0895 53521.

WHITE HEAD PDL – Atari ST PD from £1.40 per disk. Send two second class stamps for latest list to Hakan Akbas, White Head PDL, 15 Cavendish Mansions, Clapton Square, London E5.

WIZARD PD – 178 Waverley Road, Reading, Berks RG3 2PZ.

WOOLEYSOFT – Humblesknowe Cottage, Ramolye, Dunblane, Perthshire, Scotland FK15 0BA.

X

XT SHAREWARE for sale or swap from £1 for 5.25 inch and £1.20 for 3:5 inch disks. SAE for list to Kowalik, 24 West Chilton, Ferryhill, Co Durham DL17 0HH.

● **Watch out for Future's exciting new *Public Domain* magazine, packed with reviews and features, will hit the newsstands in October.**

DAFTEST ADS OF THE WEEK

Every week in the reader ads pages of *Shopping Express* we receive some absolute gems, adverts which people have sent in apparently for real, but which just make your jaws drop in astonishment.

It would be a shame to keep them hidden away where you might miss them, so here's a quick round up of the best silly ads we've come across in the past few weeks:

SWAP my nine year old sister for PostScript colour printer, preferably 300DPI. Canon laser copier considered, must have Mac drivers. Call Richard on 0573 26032.

SWAP: Shirley Bassey original Gold Disk Will swap for ST hard drive or 9600 modem (or faster). Phone 0533 823089, 7pm to 10pm. Will take cash offer.

TWO free blank disks (3.5-inch) with every packet of boxer shorts, two pairs per pack, good quality, normally £5.99. 100 pairs sell at £3.50. Contact M Jaques, 8 Paisley House, Kershaw Street, Laisterdyke, Bradford BD3 8PA.

SECOND-HAND PRICE GUIDE

● The following chart is compiled from the reader ads we have received here at Shopping Express over the past month. The items listed are those which have been advertised in significant quantities.

● Lower priced products within a range are usually in need of some repair.

● Higher priced items are invariably being sold alongside numerous add-ons and mountains of software (Amiga Asellers are the worst offenders in this respect). This means that the figure quoted at the higher end of a range will sometimes be higher than buying a machine new.

● Remember, this is only a rough guide, so if you find an Amiga down the local market for £20, bully for you.

Product	Range	Av	Trend
Spectrum	£40-90	£70	◆
Spectrum 128	£120-220	£170	◆
Spectrum Plus 2	£150-200	£165	▲
Spectrum Plus 3	£80-180	£170	▲
C64	£50-295	£185	▲
❊ CPC464	£50-300	£148	▼
CPC6128	£225-350	£330	▲▲
❊ BBC B	£170-350	£270	NEW
SAM Coupé	£80-250	£145	NEW
PCW8256	£200-300	£260	◆
PCW8512	£250-350	£300	◆
XT PCs	£125-550	£275	▼
AT PCs	£280-950	£580	▼
386 PCs	£650-1,475	£1,000	◆
520STE	£150-430	£266	▼
1040STE	£260-400	£330	NEW
❊ 520STFM	£160-750	£295	▲
520ST	£199-420	£260	▼
1040STFM	£280-600	£430	▼
❊ Amiga 500	£220-690	£390	▲
Amiga 500 (1Mb)	£250-1,000	£620	▲▲
Amiga 500 (2Mb)	£275-1,000	£620	NEW
Amiga 1000	£200-600	£400	NEW
Amiga A2000	£649-1,000	£825	NEW
Amiga B2000	£550-1,200	£900	NEW
Gameboy	£65-100	£75	▼
Megadrive	£125-250	£160	▼
Famicom	£220-260	£230	▼
Lynx	£95-220	£150	▲
PC Engine	£90-250	£180	◆
Portfolio	£95-150	£125	▲
❊ LC10 printer	£80-120	£100	▼
9-Pin printers	£40-75	£60	▼
24-Pin printers	£100-350	£180	▲
Laser printers	£495-700	£550	NEW

❊ Advertised most frequently
▲ More expensive than last month
▲▲ Over £50 more than last month
▼ Less expensive than last month
▼▼ Over £50 less than last month
◆ Same as last month
NEW Now selling in significant amounts

● Ataris of all varieties were shifting in huge amounts last month for some strange reason. Perhaps because the sun has finally decided to make an appearance the kids are getting rid of them to raise money for skateboards, the fickle lot.

In the on-going saga of, 'can you actually find a second-hand Amiga cheaper than a new on?' we've decided to split up the A500 according to the various upgrades people have added. It hasn't really made much of a difference, though, as he damn things are still very, very expensive. ■

THE PD COLUMN

James Leach powers in with a vibrant new PD Column – this week he reports on a speedy package to add up your accounts, fun games for kids, gonk bonking and much, much more...

Databases, accounts and home business packages are all well and good, but they can be costly. If you're looking for something to handle your muddled affairs, PD is a great place to start. Stalwart PD company Amiganuts has released ***Amibase Professional II***. As its name suggests, this is a powerful database capable of handling hundreds of entries and incorporates a sophisticated find system that allows you to retrieve data easily and rapidly.

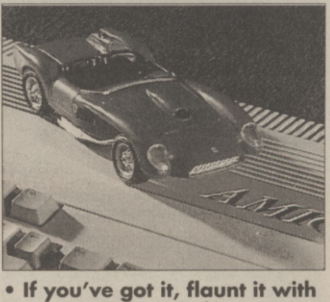
The first time you use the program, you set up the fields how you want, tailoring their number, each individual length and their position until you're happy. Then single keypresses take you into the various modes; browse, add files, delete files or change files.

It's possible to search for anything in any of the fields, and parts of words are recognised. For example, searching in a name file for 'ton' will find everybody with a 'ton' in their name, be it at the start, in the middle or at the end. This flexibility is the great strength of ***Amibase*** and sets it apart from the simpler card-files usually seen as PD.

It's great speed is an added bonus. Amiganuts warns that ***Amibase*** isn't really intended for the first-time database user, but the documentation included is clear and easy to follow, so with a bit of experimentation, anyone should get to grips with it without too many problems. But just in case, Amiganuts also has a friendly and knowledgeable voice on the end of the telephone to help out those terminally adrift in the world of files, fields and fast-finds.

PICTURES AT AN EXHIBITION

Welsh wizard Pictureware has put out another selection of fine images for the Amiga. It only works with HAM displays and therefore shows high quality screens with 4096 colours that will fair take your breath away.



• If you've got it, flaunt it with a package from Pictureware

Many demos have nice graphics, but one of the good things about Pictureware's is that there isn't a jangly tune playing, using up lots of memory and making it difficult to fiddle around with the pictures themselves. Half the fun of good graphics should be seeing what you can get up to with them and Pictureware's are certainly worth a peek, if only to expand the horizons of your own graphical genius.

PUBLISH AND BE DAMNED

If you're a budding magazine or fanzine producer, ***PageStream*** from Caledonia PDL might be right up your street. It's a desktop publishing package which allows you to manipulate words and pictures with an impressive degree of accuracy and a fair turn of speed. It runs from the WIMPS environment (that's Windows, Icons, Mouse and Pointers) so it's easy enough to get to grips with.

DTP can be a complex subject, but ***PageStream*** makes things as painless as possible, and in no time you'll be dropping piccies from any of the major ST art packages into your text. A variety of fonts is supplied and the shape and size of the words are easily manipulated. You can also bolden or italicise, using keyboard short-cuts.

One megabyte of RAM is recommended because the program itself takes up a lot of space, but if you

AMIGANUTS UNITED
169 DALE VALLEY ROAD, HOLLYBROOK, SOUTHAMPTON, SO1 6QX.
Tel enquiries: 0703 785680, Mail Order only.
DISTRIBUTORS OF THE FANTASTIC AMIGA CODERS CLUB DISKS
EUROPEAN DISTRIBUTOR FOR THE WORLD FAMOUS T. BAG DISKS FROM MERLIN SOFTWARE

1036: Amibase Professional II (v.1.2). The new additions to this database make it a must have. It includes a nice picture addition facility. (1Mb) £3.50
877: 1 Across 2 Down. A fully fledged crossword program. (Data disk No: 1 is supplied free!), for only £5.00. Data disks 2, 3 and 4 are now ready at £2.00 each.
1068: MOD Processor v1.92. make picture and/or music progs, adjust pic height/width. This version will load the new 8 channel octamed music and is excellent!..£3.50
1075: Intuimenu. The easiest way to run all your programs, the editing feature allows you to set up all your progs to execute at the click of your mouse....................£3.00

NO MORE WAITING! SUBSCRIBE TO THE WORLD FAMOUS AMIGA CODERS CLUB NOW!
SEE OUR AD IN THIS WEEK'S SUPPLEMENT FOR FURTHER DETAILS.

Leclerq Xavier's MASTER VIRUS KILLER V2.2 IS HERE!
This program is a 'must have' if you want to ensure that your collection is protected against all the latest and most harmful Virii around today.

Mike Simpson's A-GENE. The full two disk version of this excellent program is now available only from Amiganuts. If you have tried the single disk demo versions that are available in the Public Domain and were impressed, you will want this!

SEE OUR AD IN THIS WEEKS SUPPLEMENT FOR PRICE OF A-GENE AND MASTER VIRUS KILLER!

PLEASE NOTE THAT ALL PROGRAMS LISTED ABOVE ARE NOT PUBLIC DOMAIN

LOOK

THE FANTASTIC (1Mb) EIGHT OR FOUR CHANNEL MIDI COMPATIBLE OctaMED v1
Don't waste your hard earned money on the public domain v3.11 of Med! OctaMED includes this program and you can switch from 8 to 4 channels at will.

Only £10.00, (£15.00 for non-European). This includes return post and packing. Payment in pounds sterling only. If ordering from overseas, send a bankers order/Eurocheque etc. (Credit card orders will not be accepted)

Into coding? - Want to learn? The Amiga Coders Club is for you! ACC 1-4 is the first four compressed issues of an excellent series for coders, even if you are new to the Amiga. If you want to learn Assembly, using DevPac, (or our own new ACC special assembler disk), this is the club for you! ACC 1-4 (compressed) £1.50. The Amiga Coders Club disks are packed with source, hints, tips, advice from many of the well known coders that are on the Amiga scene today. Issue numbers 5-14 are now available. Please note, (excluding the compressed introductory disk (ACC 1-4), and no. 12, the price for each issue of the ACC disks is only £3.00. ACC 12 is our birthday issue, it is a 2 disk set, and therefore the price is £6.00. Amiga Coders Club Special! Here is a low priced assembler package for all you coders out there in Amigaland. (Given a good review in Amiga Format) £5.00.

divide up your work into conveniently-sized chunks of a page or two in length, everything runs smoothly and, for a DTP program, quickly.

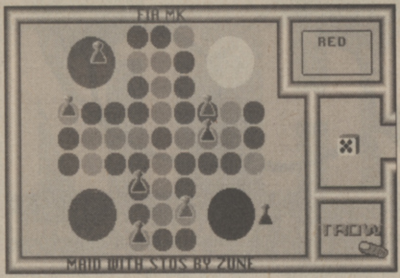
TANKS FOR THE MEMORY

Don't be misled by the title of ***Battle Zone*** from ST PD publishers LAPD. It's not that hoary old wire-frame tank game, but a rather neat airborne shoot-'em-up. You whizz over the surface of a planet (seen in side view) and blast the snake-like aliens which crop up along the way. It's colourful and it's very, very fast. Meanwhile, an excellent quality soundtrack plays in the background. The combination of speedy gameplay and demo-quality sound makes it quite an experience, and if you're into mindless blasting, ***Battle Zone*** could be for you.

BANDS ON THE RUN

There seems to be rather a run on ST popular music quizzes recently. Everyone's partial to having their music knowledge tested occasionally, but the concerted effort by various PD companies could well breed a generation of Atari-using Mike Read look-alikes (or worse still, Paul Gambaccini).

The first is from BaSoft, which is very specific about the questions it asks. Disk ***BPD2*** contains in-depth queries on Kate Bush, Phil Collins, Dire Straits and Pink Floyd. BaSoft operates a system where you send a blank disk (or two, if you're single-sided) and £1, to receive anything in its catalogue.



• *Ludo*. Not hard, not spectacular, but fun nevertheless (if you're a child)

In total contrast, Nightshift PD has produced a pop quiz called ***Popeyed*** which features a minor road accident. The story unfolds screen by screen as you get more of the questions right. It's a weird idea, but things hardly return to normality when you see a couple of scantily clad girls (the offending drivers) arguing about whose fault it was.

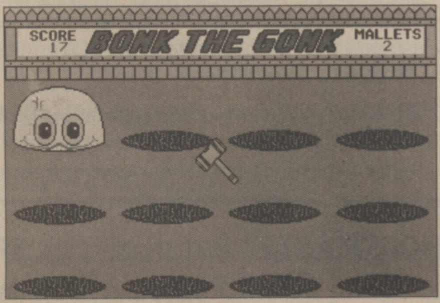
The humour with which ***Popeyed*** is done makes up for its lack of taste and the questions are nice and tough, but it's still one for when the kids are in bed.

PSEUDO LUDO

If the sexist sight of curvy wenches isn't your cup of tea, good for you. You might therefore be interested in the completely inoffensive games range from Trust PD (which also caters for the ST). The first one to cross my path is ***Ludo***. It's simply, well, Ludo.

There is a screen representation of the board and each player must get his or her counter to the middle. Yes, as you might have guessed, this one definitely is for the children. The game is very easy to use, has bright colours and a plethora of sounds, so it should keep them quiet for the duration of *Neighbours* at least.

One final game which is destined for children, but which is strangely addictive for people of all ages is ***Bonk The Gonk*** from NBS PD. Quite simply, all you do is hit the gonks on the head with a hammer whenever they stick peep out of their holes. But don't hit the dynamite that appears from time to time! Play it if you dare! ■



• There he is! Get him! Get him! *Bonk the Gonk* is certainly insidious

THE ADDRESSES THAT MATTER

Caledonia PDL (for the ST) is at:
250 Oldtown Road, Hilton,
Inverness IV2 4PT

LAPD (ST specialists)
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Derbyshire DE7 7HN

For Amiganuts go to:
160 Dale Valley Road, Hollybrook,
Southampton SO1 6QX

Rather impressive Amiga graphics can be spotted at:
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Crescent, Brynmill, Swansea SA2 0AL

ST games for the children can
be found at:
Trust PD, 18 The Park, Southowram,
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Nightshift PD, 8 Bertelin Rd,
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THE EVENT HORIZON

Are you going to be there or be square? Read this page for a complete listing of the places to be, the people to meet and the things to do when you get there ...

THE PLACES TO BE . . .

Making the Difference
Now – Tue 31 Dec
At the Science Museum, London. Info: 071-938 8080.

Human Gene Mapping International Workshop Mon 19 – Thu 22 August
At the New Connaught Rooms, London. Info: 071-2693616.

Computer Animation Competition and Exhibition Wed 21 – Wed 28 August
At the Amiga Centre Scotland. Info: 031 557 4242.

PLASA Light & Sound Show
Sun 8 – Wed 11 Sept
At Olympia, London. Info: 071-370 8174.

Leeds Computer Extravaganza
Fri 13 – Sun 15 Sept
At the New Exhibition Centre, Leeds University. Info: 0532 677 657.

CP/M & MSDOS User's Group
Sat 14 Sept
At the Spring Lodge Community Centre in Witham. Info: 0376 517496.

Business Computing '91
Tue 17 – Fri 20 Sept
At the Earls Court Exhibition Centre, London. Info: 071-486 1951.

International Police Exhibition and Conference '91 Tue 17 – Thu 19 Sept
At London's Barbican Exhibition Centre. Info: 081-995 7700.

The Works of Charles Babbage
Thu 19 Sept
Lecture at the King Edward VI College, Totnes at 14.15. Info: 0803 863821.

Effective Management of Information Technology Security Conference
Mon 7 – Tue 8 Oct
At the Forte Crest Regents Park Hotel, London. Info: 071-587 1117.

Computers Count Tue 8 – Thu 10 Oct
At Totnes Civic Hall. Info: 0803 863821.

Business Communications Awards
Thu 10 October
At the Savoy Hotel. Info: 0800 800 847.

Charles Babbage's Impact on Modern Computing Wed 23 Oct
At the Science Museum, London at 17.30. Info: 071-938 8196.

Image Processing '91
Tue 29 – Thu 31 Oct
At Birmingham NEC. Info: 081-868 4466.

System Builder Wed 30 – Thu 31 Oct
At Sandown Exhibition Centre, Esher, Surrey. Info: 0822 614671.

Computer Graphics '91
Tue 5 – Thu 7 Nov
At the Alexandra Palace, London. Info: 081-868 9933.

Desktop Cad '91 Tue 5 – Thu 7 Nov
As above.

Open Systems 91 Wed 6 – Fri 8 Nov
Olympia, London. Info: 0784 472200.

All Micro Show and Radio Rally
Sat 9 Nov
Bingley Hall, Stafford. Info: 0473 272002.

Computers in the City
Tue 12 – Thu 14 Nov
At the Barbican Centre, London. Info: 081-868 4466.

World of Commodore Show
Fri 15 – Sun 17 Nov
A show for all things Commodore, presented by the *Amiga Format* team. At Earls Court, London. Info: 0462 420785.

Vision and Reality
Thu 28 – Fri 29 Nov
A conference on multimedia at Jaarbeurs, Utrecht, the Netherlands. Info: +31 (0)70 3560666. ■

The Insider...

What? What? What? and yeah again What? Gossip, scandal, scullduggery and general rumour. Read on...

Why, oh why has the European Computer Entertainment Show gone trade only? Is it the recession? Is it internicine quibbling? Is it atrocious organisation or is it because Atari mentioned that it might think about attending? Who knows? We will find out in due course.

By the way, if you have any Insider info which you think needs disseminating, you should send it in to: The Insider, *New` Computer Express* , 30 Monmouth Street, Bath, Avon BA1 2BW.

HOLIDAYS IN COMMODIA

Anyway this week has been a veritable high octane, triple whammy. The Insider went to Bali to soak up some sun, hang with the beautiful people, the ex-hippies in search of cheap thrills and transcripts of early Steve Jobs speeches, and the public relations people who are trying to drink their way around the world whilst still extolling the virtues of various brain-mushing computer so-called games.

So this copy is being filed via my Toshiba laptop and fax/modem card. From the objective security of this island idyll, I can reflect on the cat-eat-cat nature of the computer world.

For example, the change in nature of the ECES from trade/public to trade only is already making a great many people look to their pockets and weep. Last year's show was a huge success with queues reaching around the block and companies walking out of Earl's Court swelled to bursting with free food and customer's dosh.

This year looks like being a little more dour with less booze, no punters, and no Betty Boo singing her mike off. You can almost hear the organisers of the All Format's Fair sobbing in sympathy.

IS THIS SICK OR WHAT?

Express hacks are coming in for mucho stick from the bellicose burghers of Bulletin Board land.

Following the SICK front cover which was so admired throughout the industry, certain sysops and BBS people took to flinging insults around to the effect that hacks and hackettes on this glorious organ were 'trained chimpanzees' and 'vipers'.

There were even threats from the free-speech loving, retentives, sorry, representatives of PD to kick *Express* off a number of boards.

Insider thinks that this curtailment of the debate is showing the PDers up. It could even lead one to believe that they are protesting just a little bit too much for such fluffy, clean, sweet enthusiasts.

This, of course, does not imply in any way that these people are anything short of saintly in their pursuit of the truth and freedom of speech.

● WIN £5 for doing next to nothing! Bad service? Faulty goods? Dodgy dealings? Write and tell The Insider.

Golden Moments

A look back into the history of computing with *Express*. If it happened, we reported it first.

ONE YEAR AGO

● Software publisher Lotus was besieged by the League for Programming Freedom. Members of the League were protesting at Lotus' successful prosecution of competitors who had used interfaces similar to that of *1-2-3* in their packages. The protest was far from violent, but the message was certainly serious – Apple is still attempting to sue others for allegedly stealing the Mac's 'look and feel'.

● Commodore announced the C64GS – the console based around its successful C64 computer. Surprisingly, not many people were willing to buy a system based on an eight-year-old computer that lacked many of its begetter's facilities: it lasted less than a year before its withdrawal.

● Sex with your computer will be the only alternative for the connoisseur, according to a US librarian cum lecturer. He predicted that in the future computers will be wired directly to the pleasure centres in our brains, saying that "the only sex organ anybody has is in the brain". This seems less than true to us, although we are aware of those who's only brain is in their sex organs!

TWO YEARS AGO

● Nintendo sought an injunction against Blockbuster in Newark, USA. The shop was allegedly renting out games cartridges along with photocopies of the instructions, an activity which Nintendo was less than happy about. The problem is far from solved, with many video rental chains now catching on to the idea of hiring out games, without the permission of the games' manufacturers.

● The extent of the new-fangled crime of computer burglary was revealed by police when they showed members of the press a haul of stolen hardware valued at £300,000. Prime targets for the thieves were identified as schools, colleges, warehouses and offices. At the time, the police estimated that if you were to buy a second-hand computer, there was a 40 per cent chance that it would be a stolen model.

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CREATIVE ACCOUNTS

Using a low cost spreadsheet doesn't necessarily mean you are limited to basic number crunching. Dave Golder found a software package which takes data manipulation into a new dimension

PRODUCT: 3-D Calc Spreadsheet
MACHINE: 1Mb Ataris and above
FROM: Microdeal
CONTACT: 0726 68020

In principle spreadsheets are basically the same today as they were when they were first introduced, based on grids of 'cells' into which you can enter numeric data and mathematical formulas for manipulating that data (this usually means adding up figures). A few enhancements and functions have been added, such as the capability to generate graphs and charts from the data, but the only real revolution of any sort was the introduction of the 3-D spreadsheet.

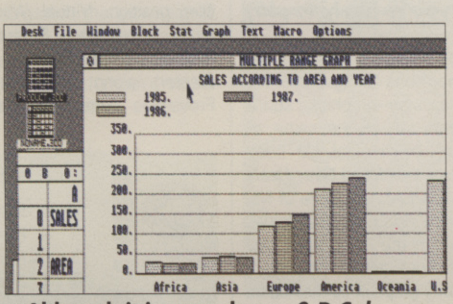
Instead of just having columns and rows on a spreadsheet, a 3-D spreadsheet introduces an element of 'depth' as if there are a number of spreadsheets all stacked up next to each other. This means that you can have a spreadsheet that can take into account three elements – age, weight and height for example – in a single cell as opposed to the usual two.

This may sound like the high powered domain of company accounts, but Microdeal has produced a very creditable 3-D Spreadsheet for the Atari ST which costs less than £30. Called *3-D Calc Spreadsheet*, it is far from a graphical masterpiece and hardly features the most astounding range of features you are ever likely to see, but in terms of power and functionality it is more than ample for the needs of most unfussy home users or small businesses.

LOADSACELLS

The copy we reviewed was a pre-release version which was a bit buggy but still performed effectively. The main problem was that, despite what the packaging states, there was no way we could make it run in colour.

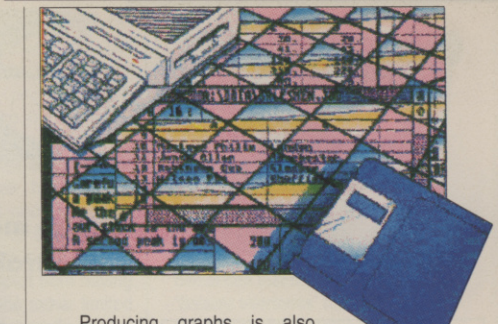
Each spreadsheet contains 2,048 rows by 256 columns of cells which should be enough for most home users' needs – a season of amateur cricket scores or a year's worth of bank domestic accounts should fit on quite comfortably. And with the ability to link up to 13 spreadsheet pages to form a 3-D grid, there is room for an awful lot of information. *3-D Calc Spreadsheet* can also hold up to three spreadsheets in its memory simultaneously.



• **Although it is very cheap, *3-D Calc Spreadsheet* has some graphical capabilities and can produce pie, line and bar graphs**

Entering data into a cell is fairly straightforward. Each cell has a name comprising three elements. The first is the spreadsheet page number. If you are only working on a 2-D grid then this is irrelevant, but a 3-D grid will label the top spreadsheet '0', the next '1', the one after that '2' and so on, up to a maximum of value of 12. The second element is the column name, and the third is the row number. So, for example, 2B3 would be the third sheet back, the second column along, fourth cell down (the first sheets and rows are always '0').

So you enter the name of your desired cell, then type in your data, press a cursor key and hey presto! Unfortunately, entering the formulas to add up a column or find the average of a row, for example, is far more complex, but more on that later.



Producing graphs is also fairly straightforward. You have a choice of pie, line or bar graphs, and you enter the data by dragging the mouse over the relevant rows or columns. The main program can also produce line or bar graphs showing multiple ranges so that, for example, you can compare two different batting averages.

Another major bonus is that *3-D Calc Spreadsheet* is compatible with other major spreadsheet, including the mighty Lotus *1-2-3* and *Symphony*.

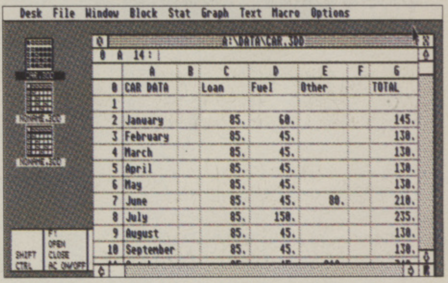
This means that data from Lotus spreadsheets can be imported on *3-D Calc* spreadsheets and vice versa. This is especially useful for people who use spreadsheets at work and need to take their work home.

DRAWBACKS

However, two major, and interconnected, points really let the program down. Basically, it is very difficult to learn and use unless you have had experience of spreadsheets before. The program itself is hardly user-friendly – there is not even an on-line help facility – and the manual seems to take it for granted that the user is au fait with spreadsheet concepts.

This is especially annoying if you are trying to set up your own spreadsheets when you haven't a clue how to tell a cell that it should add up all the values in row four and multiply them with the total of the values in column c. The clues are in the manual, but they are extremely difficult to find.

This is a big shame because the price of *3-D Calc Spreadsheet* will be very appealing to first time users, but they may well be put off by what a difficult piece of software it is to use. ■



	A	B	C	D	E	F	G
0	CAR DATA		Loan	Fuel	Other		TOTAL
1							
2	January		85.	60.			145.
3	February		85.	45.			130.
4	March		85.	45.			130.
5	April		85.	45.			130.
6	May		85.	45.			130.
7	June		85.	45.	80.		210.
8	July		85.	150.			235.
9	August		85.	45.			130.
10	September		85.	45.			130.

• **The program can hold up to three different spreadsheets, each containing up to 6,815,744 individual cells**

VERDICT BOX

FOR
- ▲ **A very attractive price**
- ▲ **Powerful features**
- ▲ **Lotus 1-2-3 and Symphony compatible**

AGAINST
- ▼ **Difficult to learn or use**

COST: £29.95
VALUE: Super

COMPETITION
No others that can offer the same functions at the same price

SON OF SPREADSHEET AND ACCESSORIES

The *3-D Calc Spreadsheet* package comes with three disks: the main program disk (as covered in the main text), the Junior disk and an accessories disk.

The Junior disk is a cut down version of the main program for half megabyte STs which can produce one basic 2048x256 cell '2-D' spreadsheet at a time. It can also generate simple graphs showing the relationship between two sets of values. There are also other limitations in term of features.

While it is a fairly competent spreadsheet program in itself, though fairly limited, its inclusion in this package is odd. Maybe the idea is to encourage half megabyte ST owners to buy the package in the hope that they will be upgrading at some point. And at under £30, it is still quite good value for money.

The accessories disk contains a number of utilities, such as ones to transfer files to and from other spreadsheets such as Lotus *1-2-3*, and a number of demo files which are invaluable when trying to learn how to use the software.

At the price, which is very cheap, *3-D Calc Spreadsheet* is very good value for money, offering a wide range of features and competent graphical capabilities. Unfortunately, it is let down by a rather clumsy and difficult operating system which would be very frustrating for first time spreadsheet users.

Games Week

TIPS! to make you the whizziest player around, NEWS! to keep you hot on the trail of what's happ'nin', REVIEWS! of the greatest games around

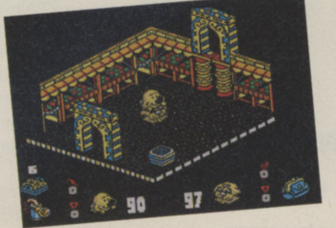
STAR RATINGS

★★★★★ = Total Recall
★★★★ = Terminator
★★★ = Predator
★★ = Pumping Iron
★ = The Jayne Mansfield Story

FALLING IN LOVE

Some of our older readers may remember the heyday of the 8-bits. Way back then, when dinosaurs (the VIC-20, the ZX81, the Electron) still walked the Earth, there was a game called ***Head Over Heels***, an isometric-3D-puzzle-arcade-adventure in the mould of the legendary Knight Lore. An absolutely wonderful piece of software, it took its genre to the limits, and quickly became one of the most-played games ever.

Since the rise to prominence of the 16-bits, there have been rumours of an impending conversion, but only now has it finally happened. Ocean's programmers have finally almost completed the ST and Amiga ports, and the Manchester giant is, admirably, releasing the game straight on to its £7.99 Hit Squad label.



• *Head Over Heels* – simply one of the best games you're likely to play

Nothing much has changed from the original versions, the graphics, sound and map layouts are all the same as before, and my sentimental old heart would like to think that ***Head Over Heels*** is set to enjoy a whole new lease of life, as 16-bit gamers discover what things used to be like in the days when you couldn't bury tedious games beneath a mountain of pretty graphics and samples in order to make them sell.

Much more than just another nostalgia trip, ***Head Over Heels*** is simply one of the best games you're ever likely to play. Start camping outside your favourite software shop today.

ALL TOGETHER NOW

Blimey, it must have been at least six weeks since Domark released a compilation. Surely it's time for another couple? And sure enough, a quick peek at the release schedules show that right about now you should be able to find on the shelves not one, not three, but two collections of 'classics' all bunged into one box for your composite gaming pleasure.

Grandstand is a sports set, comprising ***Pro Tennis Tour***, ***Leaderboard*** and ***Continental Circus***, with ***Gazza's Super Soccer*** taking the filler position. Virtual Worlds contains three re-released Freescape games (***Driller, Total Eclipse*** and ***Castle Master***) along with one unreleased Freescape game, the ***Castle Master*** follow-up ***The Crypt***. Prices are £29.99 for the 16-bit packs and £14.99 for the 8-bit versions.

HERE IT COMES AGAIN

Y'know, dear hearts, I simply couldn't count the number of people who've come up to me and said, 'Stuart, I'm completely bored with playing the same tedious old shoot-'em-up/beat-'em-up/flight sim games week in, week out. Why can't software houses release something just a little bit different every once in a while?'

That's probably only because I can't count past five, but in any case what I always say to people like that is 'Ah, but

TOP 10 ALL FORMATS CHART

THIS WEEK	LAST WEEK	TITLE	PUBLISHER	MACHINE
1	1	*Man United Europe*	Krisalis	SP CO AM ST AG
2	2	*Hero Quest*	Gremlin Graphics	SP CO AM ST AG
3	NE	*Rainbow Collection*	Ocean	SP AM ST AG
4	3	*Dizzy Collection*	Code Masters	SP CO AM
5	4	*Teenage Mutant Hero Turtle*	Codemasters	SP CO AM ST AG
6	12	*F15 Strike Eagle 2*	Microprose	ST AG
7	7	*Monkey Island*	US Gold	ST AG
8	28	*Shadow Dancer*	US Gold	SP CO AM ST AG
9	10	*Big Box*	Beau Jolly	SP CO AM ST AG
10	18	*Supremacy*	Virgin	CO ST AG

ST = Atari ST AG = Commodore Amiga PC = IBM PC or compatible SP = Spectrum
CO = Commodore 64 AM = Amstrad OT = Other.
Chart compiled by Gallup. © European Leisure Software Publishers Assoc.

TOKI

Ocean

AMIGA

If you're in an 'infinite credits' kind of mood, and you also can't be bothered with all that tedious mucking around with having to play through one level in order to get to the next one, then take your head out of the oven, put the shotgun and razor blades down and turn the car engine off, because help is at hand. If you simply type in the word 'KILLER' while playing the game, those self-same infinite credits will be yours to squander at will, and pressing the F1 to F8 keys will allow you to select levels (or even the end sequence). What more could you wish for? A bit of zaniness, maybe? Okay then, simply hit the 'R' key to flip the screen upside down, for an 'interesting' extra element of challenge. If your eyes go funny after a while, just hit 'N' and everything (well, the Toki screen, anyway) will be back to normal.

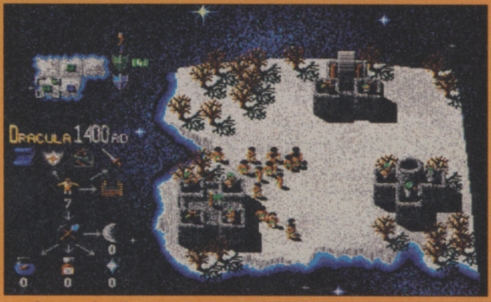
ST

What's that, ST owners? You say you want to be able to cheat at Toki too? Well, that's all right, 'cos I've got the magic word for that as well. If you hit 'Esc' while on the intro sequence, then type 'POORTOKI', then you should find that you're now also endowed with levelskipability, at a touch of the F1 to F8 keys.

BEG, BORROW AND BURN

BEG

MEGA-LO-MANIA • IMAGEWORKS



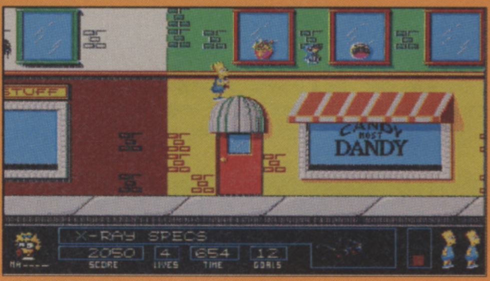
"I don't think it's nice, you laughin'..."

Described by some as '*Populous* with laughs', *Mega-lo-Mania* manages to rise above both its obvious origins and the ridiculous hyphenating of its title to prove a maddeningly addictive god sim which doesn't have to take itself seriously to be a seriously great game. Extremely tough, but enormously rewarding, *Mega-lo-Mania* treads the fine line between compulsion and frustration perfectly.

BORROW

THE SIMPSONS • OCEAN

OK, so you don't actually have much option with this one, as the only other way of getting a copy is to go and fork out £400 on the new Amiga Cartoon Classics pack. But if you've got a new-Amiga-owning chum, you can have some pretty excellent fun with this surprisingly good Bart licence. Ocean has pulled its socks up a bit after a recent poor run and produced a game which, while by no means stunning, is just a little bit more intelligent and entertaining than most of us had been expecting.



'Oh, aliens, up yours!'

BURN

METAL MUTANT • SILMARILS/PALACE

Everybody likes it, I don't care. This tedious scrolling beat-'em-up is slow, repetitive, unimaginative, incredibly shallow, unpleasant to control and generally unimpressive at best in every area. Screen after screen of the same old yawn-inducing baddy-thumping action sends you into a stupor quicker than snorting Pernod, and if you're the kind of person who's likely to buy it, please stop now. Or preferably just kill yourself.

they have. Why, you only have to look at some of the great re-releases currently nestling on the shelves of your local software emporium to see that it's true.'

At this point they invariably say, 'Tell me more, Stuart!', which is why, to save myself some time, I've decided that this week I'll be taking a retrospective kind of look at some games which are just a little bit... OFF THE WALL

TOOBIN' • Respray • £7.99 16-bits
• The Hit Squad • £3.99 8-bits

Toobin' brings you the dubious pleasure of sailing down an alligator-infested river in an old tyre inner tube with your backside hanging out of the hole in the middle. The pneumatic nature of your transport makes you prone to all sorts of inflatable-rupturing dangers, including sharp rocks and fishermen's hooks, which you have to avoid by paddling away or throwing Coke tins at them.

So far so pleasurably wacky, but when you come to the gameplay it all falls apart quicker than a wonky Lada.

Control is sluggish, imprecise and unnatural and the different levels change only in terms of scenery. You don't really feel that you've got much influence over the watery goings-on, and despite being (on all formats) a pretty decent conversion of the coin-op in most respects, ***Toobin'*** was simply never much of a game in the first place. ★

***NORTH & SOUTH* • Action Sixteen**
• £7.99 16-bits.

The French wargame is a very rare breed on these shores ('What shores?' 'Oh, a triple vodka and Drambuie for me, thanks'), indeed as far as I know it's a breed with only one member.

North & South is a game set in the American Civil War and lets you control either side in an attempt to capture the whole country, by means of simplistic board-game-style battling, supplemented by optional arcade sequences.

The major strong point of the game is the beautiful, funny presentation, and indeed if you choose not to bother with the arcade sub-games the gameplay is very thin indeed, but all the same this is a fast-moving and entertaining game that'll bring more than the odd chuckle to the most weary of gamers' faces. ★ ★ ★

***ZANY GOLF* • Electronic Arts**
• £9.99 16-bits only

This is more like it, though. Crazy golf has always been one of the more inventive pseudo-sports around, and this computer version does a surprisingly good job of capturing the essential feel of the real thing. In fact, stick a big fan beside you while you're playing and get a friend to chuck some sand in its general direction, and you'll be hard pushed to tell that you're not really on the promenade at Southport at all.

Zany Golf also takes advantage of the medium to produce holes which would be impossible in real life, yet fit perfectly into the spirit of the genuine article. Play – for up to four players – is intuitive and slick, and apart from having a few more holes than the rather limited nine supplied, you couldn't really ask for more from this game.

More enjoyable as a one-player game than most others of this ilk, ***Zany Golf*** nonetheless really comes into its own when you get a few pals in, and in that mode it's a classic. ★ ★ ★ ★ ■

HATSTAND CORNER

Liverpool software giants Psygnosis suffered a disappointment earlier this year when their Amiga blockbuster Shadow Of The Beast II was banned in 23 American states after pressure from the powerful fundamentalist lobby who demanded that it be withdrawn lest its 'Satanic overtones' corrupted the nation's impressionable youth. When asked for a reaction, a Psygnosis spokesman denied the accusations vehemently, adding 'stnerap ruoy llik ,daed si dog'', but to no avail, and the game subsequently flopped.

TOP 10
ALL FORMATS BUDGET

THIS WEEK	LAST WEEK	TITLE	PUBLISHER	MACHINE
1	2	*Shinobi*	Mastertronic	SP CO AM ST AG
2	1	*Bubble Bobble*	Hit Squad	SP CO AM ST AG
3	5	*Magic Land Dizzy*	Codemasters	SP CO AM
4	4	*Double Dragon*	Mastertronic	SP CO AM ST AG
5	6	*Fantasy World Dizzy*	Codemasters	ST AG PC
6	3	*Dragon Ninja*	Hit Squad	SP CO AM ST AG
7	30	*TV Sports Football*	Mirror Image	ST AG
8	11	*Untouchables*	Hit Squad	SP CO AM ST AG
9	9	*Quattro Cartoon*	Codemasters	SP CO AM
10	13	*The Games – Summer Edition*	Kixx	SP CO AM ST AG

ST = Atari ST AG = Commodore Amiga PC = IBM PC or compatible SP = Spectrum
CO = Commodore 64 AM = Amstrad OT = Other.
Chart compiled by Gallup. © European Leisure Software Publishers Assoc.

NEBULUS 2 (POGO-A-GO-GO) 21st Century Entertainment • Amiga, ST • £25.99 ★

The original *Nebulus* was one of the best games ever to grace any computer. It has appeared on the Spectrum, C64, Amstrad, Amiga, ST, Game Boy and Nintendo NES, and was received everywhere with critical delight.

The simple climb up/fall down nature of the tower-ascending gameplay, coupled with the gorgeous rotation scrolling, cutesy characters, and lovely presentation touches ensured a monstrously addictive game which created armies of devoted fans everywhere it went.

Now the resurrected Hewson label (er, I mean, the completely-new-and-not-in-any-way-connected-to-the-veteran-software-house-which-crashed-only-a-few-months-ago-with-horrific-debts 21st Century Entertainment label) has come up with a sequel, and it sucks so badly that I fear the summer recess is the only thing preventing questions being asked in Parliament about it.

So, how have they done it? How on Earth have they managed to turn such a magnificent classic into such a complete hound? At first glance, the original formula doesn't seem to have been tampered with too much, the old towers-and-platforms-and-baddies structure still seems to be intact, but with the addition of prettier graphics, new features, improved presentation and power-ups. Peer a little closer, though, and you find that the incredibly compulsive gameplay of yore has been drowned under a weight of unnecessary new twiddles, so that nothing of what made *Nebulus* so great in the first place remains.

The towers which were much of the obstacle to progress in the first game are now just somewhere to stick all the new enemies. They're miles too high, too, the essence of addictiveness is the belief that the completion of a level is just within your grasp but in *Nebulus 2*, you're likely to get bored before you get very excited at nearing the top of even the first tower, and you don't need me to tell you that that's not a recipe for lasting entertainment.

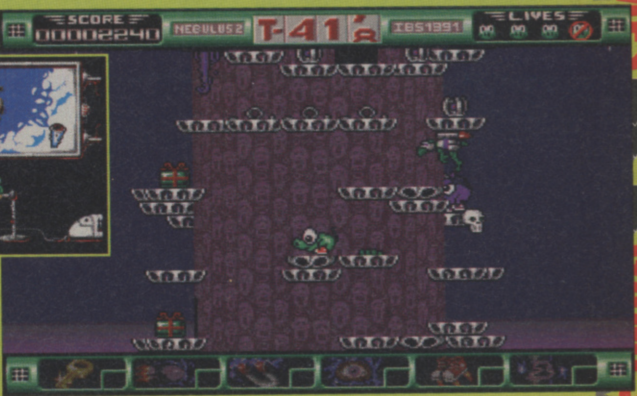
The new features are straight out of the *Lazy Programmer's Guide To Sequels* book, ranging from the pointless (locked doors with the key right beside them), to the plain crap (invisible platforms which don't appear until you walk on to them, leaving you to spend half the game speculatively walking into dead space and plummeting back down the screen to the bits you've trekked past 14 times already), to the absolutely absurd (the second level has you actually *descending* a tower, falling *upwards* when you get hit by an enemy! I mean, have these people got the faintest idea of what they're doing? They're missing the point by such a distance you have to wonder if they're actually aiming at the same target as the rest of us.

Even the little sub-games between towers are duff, lacking in character and life, and going on for too long into the bargain. And the power-ups! The power-ups are just SO awful I can hardly bring myself to write about them without screaming. Just as an example, there are little magnets which pull you up to a higher platform, except they only work in certain places and half the time they don't work even then! Excuse me, I'm going to have to go for a lie down in a darkened room for a day or two...

OK, having calmed down a bit, I can tell you that *Nebulus 2* is somewhere close to tolerable if you treat it as a puzzle game rather than a *Nebulus* game, and though it carries none of the style, elegance, playability or compulsiveness, the presentation is quite good.

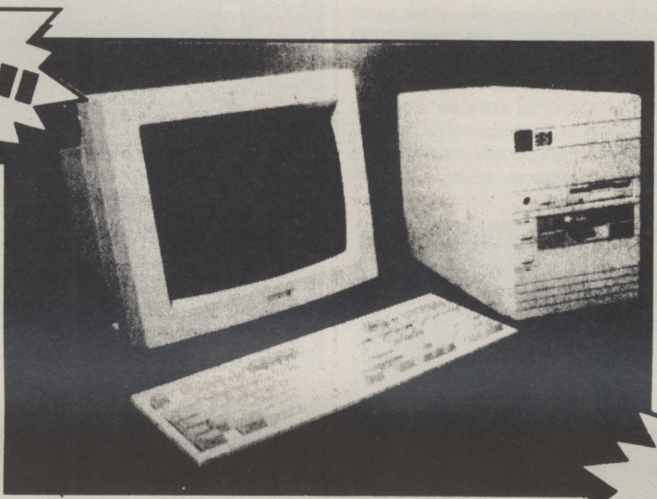
If you were a fan of the original though, this is a disgrace bordering on the blasphemous. Steer well clear.

I don't know what you're looking so happy for, pal. Nebulus 2 isn't anything to smile about, that's for damn sure as mustard.



"WHAT!!! PC TOWER SYSTEMS from only £399 + VAT"

"YES!!"



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PHILIPS PCL 203

SMALL IS BEAUTIFUL

Notebook computers may be just as powerful as desktop machines, but how much should their added portability cost? Tim Howell slides the Philips PCL 203 into his briefcase to find out if this new notebook offers good value for money

PRODUCT:	**Philips PCL 203 Notebook**
COMPATIBILITY:	**PC**
FROM:	**Philips**
CONTACT:	**081-689 2166**

There is a subtle difference between laptop and notebook computers. While they are both portable machines, notebooks are smaller yet manage to have just as many features as their larger cousins. Basically, if a machine can fit inside a briefcase, it is regarded as a notebook. A laptop, on the other hand, would be carried on its own.

Philip's PCL 203 is an AT-compatible notebook, equipped with a 12MHz 80286 processor and 1Mb of RAM. The memory can be expanded to 8Mb on board which is quite a feat for a computer this small.

And Philip's notebook is very small. It measures only 220 by 280 by 52 millimetres, which is less than the size of an A4 page. In this space a lot of hardware has been included. To start with, there is a 1.44Mb 3.5-inch floppy drive and a 20Mb hard drive.

Also, there are serial and parallel ports, din plugs for a PS/2 mouse and an external keyboard, as well as a video port for connecting the machine to an external monitor. The serial port is only a 9-pin connector instead of the more standard 25-pin, so a different cable or an adapter is needed to use peripherals which have a 25-pin connector. A box can be connected to the machine to provide some XT or AT compatible slots.

ON DISPLAY

There are numerous display options as the PCL 203 has a VGA backlit liquid crystal display (LCD) screen which can not only display VGA, but also MGA, Hercules, CGA and EGA graphics. The screen gives a clear and stable display in all sorts of lighting conditions, although, like other LCD screens, the speed of some games means the display often becomes blurred.

The PCL 203's full-travel, tactile keyboard has 80 keys which can emulate the 101 or 102-key versions of larger desktop computers. It has an embedded numeric keypad which uses keys in the central part of the keyboard for numerals.

Unusually, the keyboard also controls the hardware; other laptops and notebooks use standard knobs. By using the 'Fn' key the keyboard can adjust the brightness and contrast of the screen, or whether the machine is outputting to its own or an external monitor. While doing these functions with a keyboard is a bit of an inconvenience, it does mean that the settings can't be changed accidentally.

BATTERY RAM

One important feature which determines the usefulness of a portable computer is how long the battery lasts. The PCL 203 can last for over three hours on its rechargeable battery, which is a reasonable length of time compared to other machines. When the battery comes to the end of its charged life, the power light starts flashing and a regular beep is emitted as a warning that data should be saved.

To help conserve what power the machine does have there are a number of built-in features. If the hard drive hasn't been accessed for two minutes then it will shut itself down until it is accessed again. Also, the computer can be put in standby mode so if it isn't used for five minutes everything is shut down – the backlit screen is turned off and the two drives are put on standby until they are used again.

If you close the screen over the machine to carry it somewhere, for example, but forget to turn it off, then it will beep to remind you that it is still on. The 12MHz processor can also be slowed down to 6MHz to save battery power when processing power is not needed.

Recharging the battery back to full power takes around two hours. The device that charges the battery can also supply mains power to the notebook when it is not being used in a portable capacity.

> **The memory can be expanded to 8Mb on board which is quite a feat for a computer this small**

Another important consideration when choosing a portable machine is how much it weighs. For its size the PCL 203 weighs quite a lot: some three kilogrammes. This weight can be attributed to the notebook's case which is very thick and solid. A carrying case is supplied, but apart from protecting the machine it doesn't make it any easier to carry as it has no handle.

BUNDLING ALONG

The Philips PCL 203 is bundled with a variety of software. *MS-DOS* version 4.01 and *GW BASIC* are standard fare when it comes to bundled PC software, but Microsoft *Works 2.0* and *Fastlynx* file transfer software are also included. The inclusion of *Works* means that the notebook can immediately be used for something useful. *Works* is an integrated software package which includes word processing, spreadsheet/database and communications facilities.

• A powerful package — Philip's PCL 203 Notebook can last for over three hours on its rechargeable battery

Software for setting up the machine is built-in. This is basically a menu screen that controls its functions, including which serial ports are active, setting the clock, and determining how long the machine should wait before it shuts down. This not only makes it easy to customise the settings, but it also shows how the machine is set up, making it easier to locate problems should they occur.

VITAL STATISTICS

Processor:	80286 (12/6MHz)
RAM:	1Mb standard, expandable to 8Mb
Storage:	Single 3.5 inch, 1.44Mb floppy drive; 20Mb hard drive (23 millisecond access time)
I/O:	1 Serial, 1 Parallel, video, PS/2 mouse, external keyboard
Display:	Backlit VGA LCD display, 640 x 480 pixels
Screen size:	224 x 98 mm
Weight:	3 kg
Dimensions:	220 x 280 x 52 mm

MONEY MATTERS

The Philips PCL 203 retails for £1,600 which is a large sum of money. Compared to other machines on the market – both laptops and notebooks – this price puts it near the top end of the market, making it even more expensive than machines equipped with 386SX processors (such as the Ness, reviewed in *Express* 141). The PCL 203 is made by a company with a good reputation, but to pay such a premium for a brand name on a less powerful machine calls for some careful consideration. Individual dealers might sell the PCL 203 for less than its recommended price, but then they'd do the same for other machines.

All in all, the Philips PCL 203 is an attractive machine which offers almost all the features of a desktop machine in a package smaller than an A4 page. These come at a price, though, and potential purchasers would do well to shop around if they are interested in the machine. ■

MAKE A NOTE OF IT

FOR

▲ Small size
▲ Well-designed
▲ Good power-saving features
▲ Useful software bundled

AGAINST

▼ Heavy for its size
▼ Quite expensive compared to others

VALUE: Good **COST: £1,600**

COMPETITION: Toshiba, Ness and Sharp

COMPUTER FRAUD

OF CORPORATE

Hacking OUT, Viruses IN, ran the headline in *Express'* recent investigation into computer fraud and abuse. But what other facets of fraud are on the increase? Stuart Clarke investigates...

The fact that computers are now such a prevalent part of everyday commerce means that, as with any other area of life, opportunities exist for dishonest advantage. While scare stories of hacking, viruses and large scale bank frauds frequently make the headlines, the true level of computer crime is difficult to gauge. Part of the problem is actually coming by the reliable statistics required to form a clear picture of the extent of abuse.

But every three years now for the past decade, The Audit Commission, an independent body formed to provide economic advice to local authorities, has conducted a survey of computer fraud across the UK.

For the purposes of ascertaining the only reliable survey of its kind, the commission defines computer fraud as any fraudulent behaviour connected with computerisation by which someone intends to gain dishonest advantage. Within this wide net it attempts to catch incidents of fraud, theft, hacking and virus attacks.

By taking such a broad view, a wide sample of cases can be included because whether a computer is involved is less important than the knowledge that the computer's involvement may have introduced an additional risk of financial loss. The 1990 survey was only the fourth to be conducted in this country and the first to include virus attacks. The last one, in 1987, covered hacking for the first time.

DEFINITION OF FRAUDULENT

Because both hacking and viruses may not be fraudulent or designed to gain dishonest advantage, the current survey has had to widen its definitions. Fraud has been further defined as the unauthorised alteration of input, computer data and programs and the destruction, suppression or misappropriation of output from a computer process (whether paper or screen based). Theft iincorporateS the loss of data and software as well as the use of illicit copies of programs and unauthorised private work on company systems.

Hacking is defined as deliberately gaining unauthorised access to a computer system through the use of communication facilities and/or sabotaging the computer process by causing deliberate damage to the processing cycle or equipment. Viruses are simply notified as a program distributed with the intention of corrupting a computer process.

Over 1,500 private and public sector organisations respond to the call for reports of incidents of fraud and abuse, and this year a total direct loss of over £1 million was reported. But is this figure of any real consequence? After all, these days £1 million is not a lot of money and in all probability such a figure could easily be written off within the normal contingency loss budgets of the 1,500 companies concerned. Looked at in this light, an average loss of £667 per company is, for want of a better expression, peanuts.

However, there are a couple of major points to bear in mind here. Firstly, the Audit Commission's survey does not purport to be definitive list of UK computer fraud and abuse incidents, rather it provides an indication of the nature of the risks which organisations face when depending on computers to support their business activities.

The 1991 report showed that over a third of all frauds were committed by directors, managers and supervisors!

Another reason the figures seem to be low in comparison to alarmist media claims of the billions lost to fraud is that the commission's survey doesn't include losses due to natural acts such as human error, accidental damage, fires and floods. When asked whether such natural hazards posed a greater risk than deliberate acts such as fraud, theft, hacking and viruses, over 80 per cent replied that accidental acts posed a greater threat.

Secondly, this figure of a £667 loss per company assumes an equal distribution of loss. In fact after ignoring incidents where financial losses were not reported, the average loss suffered was around £17,000.

So besides being compounded by the fact that not all cases will have been reported, some will have remained undetected, some mistaken for natural loss and some covered up for fear of embarrassment. All these factors tend to underestimate the scale of the problem. So perhaps the monetary value of computer crime is not the best yardstick of the problem across such a small sample of UK companies.

If we look at the number of instances – 180 – then the figure becomes more significant. We are looking at a situation wherein one in eight companies are the victims of fraud, theft, hacking and virus attacks. Also of interest is the fact that only 23 per cent of the four types of deliberate acts of abuse focussed on were brought to light through internal control procedures. The vast majority of cases were unearthed via tip-offs from outsiders and through the perpetrators confessing. In addition, viruses were found to be an increasingly prevalent form of abuse with 30 per cent of the total number of cases being attributed to viral code introduced into systems. Fifty-four virus attacks were reported, as opposed to 73 cases of fraud, 27 instances of theft and 26 of hacking.

SUFFERING THE SCAM

As might be expected, most reported instances of computer crime were found to be targeted at local government and financial institutions. In fact, half of all incidents impact in these areas. Understandably, it is these corporate victims which are most reluctant to reveal details of the fraud suffered.

Traditionally, most fraud comprised the unauthorised alteration of data prior to input into a computer along with the alteration of data once in the system. However, the most recent survey reveals that it is destruction or misappropriation of hard copy that now represents a significantly larger share. Why should this be? Ironically, one can only surmise that such a change is because of greater system safeguards.

FRAUD BEGINS AT HOME

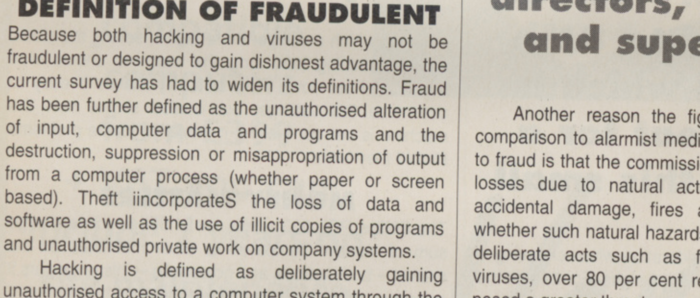
Most frauds are still being perpetrated through the submission of falsified invoices and claims along with the alteration of computerised payment data. As such, this low-value fraud is not determined by the technology and can only be termed 'computer crime' in so far as a computer figures somewhere within the fraud itself.

Fraud at the inputting stage comes into its own in cases where individuals create fictitious claimants' records and have payments made through an automated payments system direct to a bank account. Most fraud occurs in those on-line areas of computer systems where 'phone connection enables remote access and remote payment. Whereas 70 per cent of fraud can be accounted for in this way, less than one in five cases can be attributed to stand-alone microcomputer systems.

Safeguarding on-line access is the key to security. Interestingly, a third of all such cases occur in systems developed by a company's own IT department, not in systems developed by external consultants; thus underlining the fact that most fraud and abuse is instigated by a company's own employees. And indeed, it needn't be those on the lower rungs of the ladder.

The 1991 report showed that over a third of all frauds were committed by directors, managers and supervisors! From the point of view of employers, the most worrying fact about all this is that internal control mechanisms – systems checks, passwords, logging and monitoring – were only successful in discovering less than quarter of all misuse. Discovery by accident accounted for 60 per cent of all detections. but flying in

POST HELD BY PERPETRATORS



• Thirty five per cent of frauds were commissioned by managers and supervisors. Of those who committed frauds, 90 per cent had held their posts for two years or more

CONFESSIONS...

ANALYSIS OF INCIDENTS BY VALUE AND TYPE

	1990		1987		1984	
	CASES	LOSS	CASES	LOSS	CASES	LOSS
FRAUDS	73	£1,102,642	62	£2,526,751	60	£1,131,186
THEFT	27	£1,000	22	£34,500	17	£2,301
HACKING	26	£31,500	35	£100		
VIRUSES	54	£5,000				
	180	£1,140,142	118	£2,561,351	77	£1,133,487

the face of the common myth that fraudsters get off scot free by helping security personnel close loopholes, the survey also showed that three-quarters of miscreants are prosecuted under the Theft Act and dismissed.

THE NEW THIEF

The 1991 survey was the first to include the category of 'use of illicit software', introduced in an attempt to determine the extent of illicit copying of software. The Federation Against Software Theft (FAST) estimates that the level of loss to the software industry is currently running at around £270 million and that over half the senior managers who use microcomputers at work copy software illegally.

> **Over half of senior managers who use microcomputers at work copy illegal software**

Of the 27 cases of theft, only seven involved the use of copied software – though given the scale of the problem as outlined by FAST plus the fact that senior managers are likely to be the persons who return the survey questionnaires, this low percentage is perhaps only to be expected!

Most theft continues to involve sensitive data which is sold to the commercial opposition. Given that copies of such data can be made easily, the extent of the problem is difficult to ascertain. However, it seems that corporations are less likely to take tough measures against perpetrators when it comes to theft, private work on company systems and the use of illicit software. More than half the transgressions were met with cautions or no action at all.

THE DEMISE OF HACKING?

It's too early to tell whether the introduction of the 1990 Computer Misuse Act is having any significant counter-effect on incidents of hacking, but the results of the audit commission's survey do show a downturn in hacking as the prime form of computer misuse and abuse. When respondents to the survey were asked how they ranked the relative importance of each type of deliberate computer misuse, hacking finished bottom of the list. But this downgrading of the threat of hacking could have led to a lower detection level. If managers do not feel threatened by the activity they are less likely to look out for it.

Of the few cases which were reported over half were perpetrated by persons unknown. Most hackers lasted for a period of less than five days and Payroll, Personal Accounts, and Stocktaking were the most popular targets. Ironically though, the costs of detection can outweigh the costs of the theft. One company lost £20,000 to a successful hack, but spent £33,000 detecting it!

THE GROWTH OF THE VIRUS

Viral attacks accounted for 30 per cent of the reported cases in the 1991 survey, a figure which is perhaps not too surprising given that the Audit Commission estimates there are now over 350 different varieties of computer virus at large. However, in 1990 the well-reported AIDS virus – which asked users to send monies to a Central American address in return for a password to prevent their hard disks being wiped – possibly led to an over-inflated figure. The AIDS disk was sent out to over 30,000 organisations worldwide.

Otherwise the viruses most commonly accounted were the Vienna, Jerusalem, Stoned, Italian, 4096,1813 and NvirB strains. Only 16 of the instigators of viruses into computer systems were identified and surprisingly six of these were company directors! Why management should feature so regularly in computer misuse and abuse is anyone's guess.

Whilst it is difficult to quantify the loss to business of viral activity, one company revealed that it had spent £15,000 detecting and reconstituting a system after a virus, which caused no damage or direct loss, was found to have penetrated security. It is apparent that with so many strains of viruses out there, no one knows for sure, just which variant they have detected and what, if anything, are the probable results of infection.

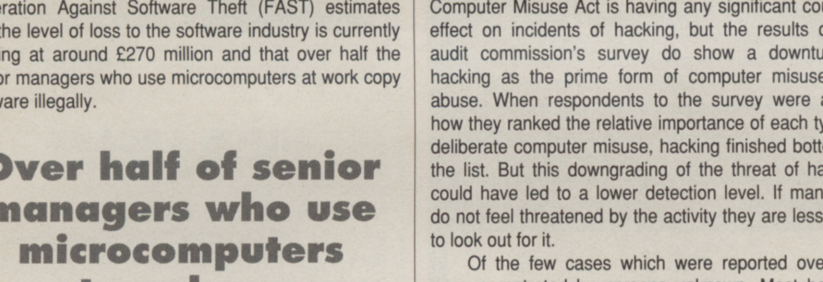
PREVENTATIVE MEASURES

The survey sought to identify the preventative steps which could and should be taken by companies to help avoid computer fraud. Given that the greatest threats to networked systems are where passwords are not being effectively used as a means of controlling access, the commission suggested four types of security measures which should be employed:

1) Continual risk analysis being conducted to identify areas most open to abuse.
2) A computer security policy which should be vigorously implemented.
3) All staff should receive computer awareness training which makes them aware of the risks and the precautions they must take.
4) An internal audit department should be set up and staff employed specificially to compile a computer security policy.

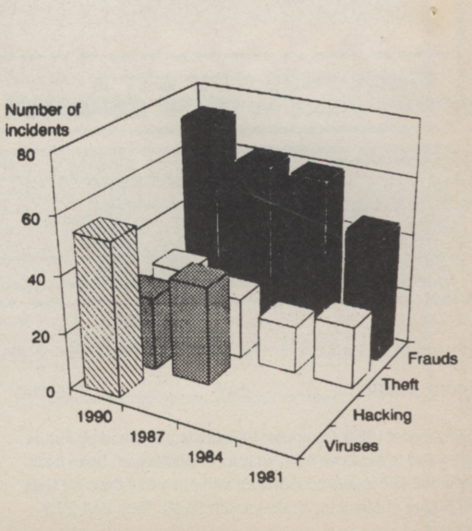
Whilst the recommendations of the 1987 report suggested that managers suffered from 'security blindness' in not appreciating the need for security measures, it is now apparent that many organisations are simply not aware of the risks that they run. ■

MOST COMMON PREVENTATIVE MEASURES



• Few organisations had computer audit skills available

ANALYSIS OF REPORTED INCIDENTS



• Frauds continue to rise

ARE YOU A WINNER?

Yes! At last *Express* is announcing the winners of more than £9,000 worth of prizes. So if you fancy your chances, read on...

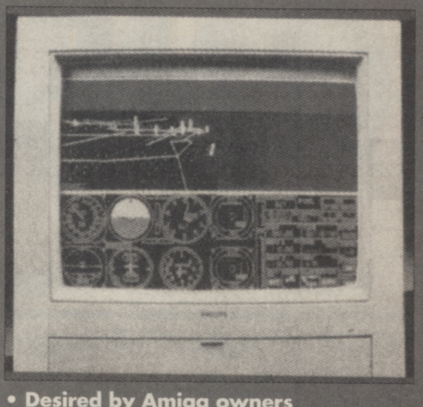
Did you get around to entering any of our competitions? If you didn't you're going to wish you had when you read ablout all the amazing prizes going out to *Express* competition winners.

So next time put pen to paper, get your brain in gear and answer those questions!

Next time you won't even have to wait long to hear if you've won a prize. From next week – Issue 146 – we're going to be announcing a competition winner every week. So there's yet another reason for you to make sure that you get a copy of *Express* every single week, as it could be your name there in print.

All the prizes for the winners of competitions on this page will be coming directly from the manufacturer/distributor. *Express* will forward all the names and addresses of winners on to them.

Now on with those winners...

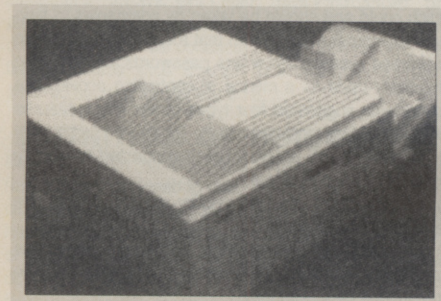


• Desired by Amiga owners everywhere – Philips' CGA monitor

PHILIPS CGA COLOUR MONITOR

J Baldwin of Blunsdon, Swindon will be the envy of every Amiga 500 owner out there, as he has won Philips' popular 14-inch colour CGA model (CM8833 mark II) monitor.

Well done – you've saved yourself £250!



• Not £1,200, not £500, but FREE!

THE ACER LP76 LASER PRINTER

The LP76 comes from UK Home Computers and is a six page a minute printer that emulates the industry standard HP Laserjet II. It can handle A4 paper and will be supplied with a toner, drum, an extra memeory card and a second sheet feeder already installed.

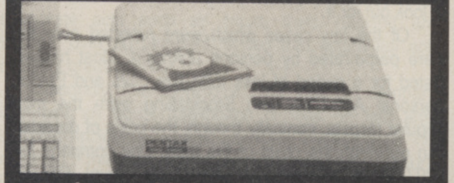
To buy the LP76 you would have to hand over £1,200, but M Bennett of Lymington, Hants is getting one for free!

PENTAX IMAGE SCANNER

Another one worth £1,200, the Pentax Image Scannner SB-AA4301 can make desktop publishing on your PC come to life. You can enhance your artwork and turn hard copy into printable artwork.

The A4 sized flatbed scanner comes with PC Paintbrush VI, a suite of software which allows you to scan and edit your images, and all the cables and interfaces to connect the scanner to your PC.

And J D Anderson of Tasburgh, Norfolk, is the person who will be produces DTP delights from now on!



• Desktop publishing is made easy and looks professional with the Pentax Image Scanner

SILICA ARCADE ACTION PACKS

Each arcade action pack contains 10 games – *Onslaught, Live and Let Die, Trivial Pursuit, Skweek, Rock 'n' Roll, Drivin' Force, Chess Player 2150, Rick Dangerous, Pipe Mania and Asterix the Gaul* – and there are six of them to give away!

And the lucky winners are:

- Martin Crookston of Burghill, Hereford
- S Pryor of St Neots, Cambridgeshire
- Joseph Jagla of Thurgoland, Sheffield
- Peter Briggs of Blackpool, Lancashire
- Michael Pun of Birmingham
- Paul Gumsley of Whitby, North Yorkshire

FIRST STEPS BUNDLE FROM COMMODORE

First Steps comes from Commodore's *Class of the '90s* series and is an integrated software bundle designed to offer a learning package that takes in productivity, applications and leisure.

Included in the pack is an emulator that allows the Amiga to run BBC education software, allowing access to thousands of programs already used in schools.

The bundle includes programs for music, word processing, database applications and artwork.

Ten winners will have *First Steps,* worth £500, delivered to their doorsteps and they are:

- Mala Ventachellum of Anstey, Leicestershire
- N K Taylor of Bournemouth, Dorset
- J Robinson of Portsmouth, Hants
- M Westall of Poole, Dorset
- J Milne of Alnwick, Northumberland
- Derek Thow of Newport, Gwent
- William Taylor of Wallington, Surrey

- A H Foster of Bassett, Southampton
- P H Perrin of Eldene, Swindon
- C W Lee of Greet, Birmingham

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YOU SAVE:	£811.23

£399

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ATARI ST - *MORE THAN JUST GREAT GAMES!*

FREE! FROM SILICA WITH EVERY ATARI ST

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FREE! WORTH: **£219.78**

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Skweek - *By US Gold*	£19.99
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FREE! WORTH NEARLY: £325

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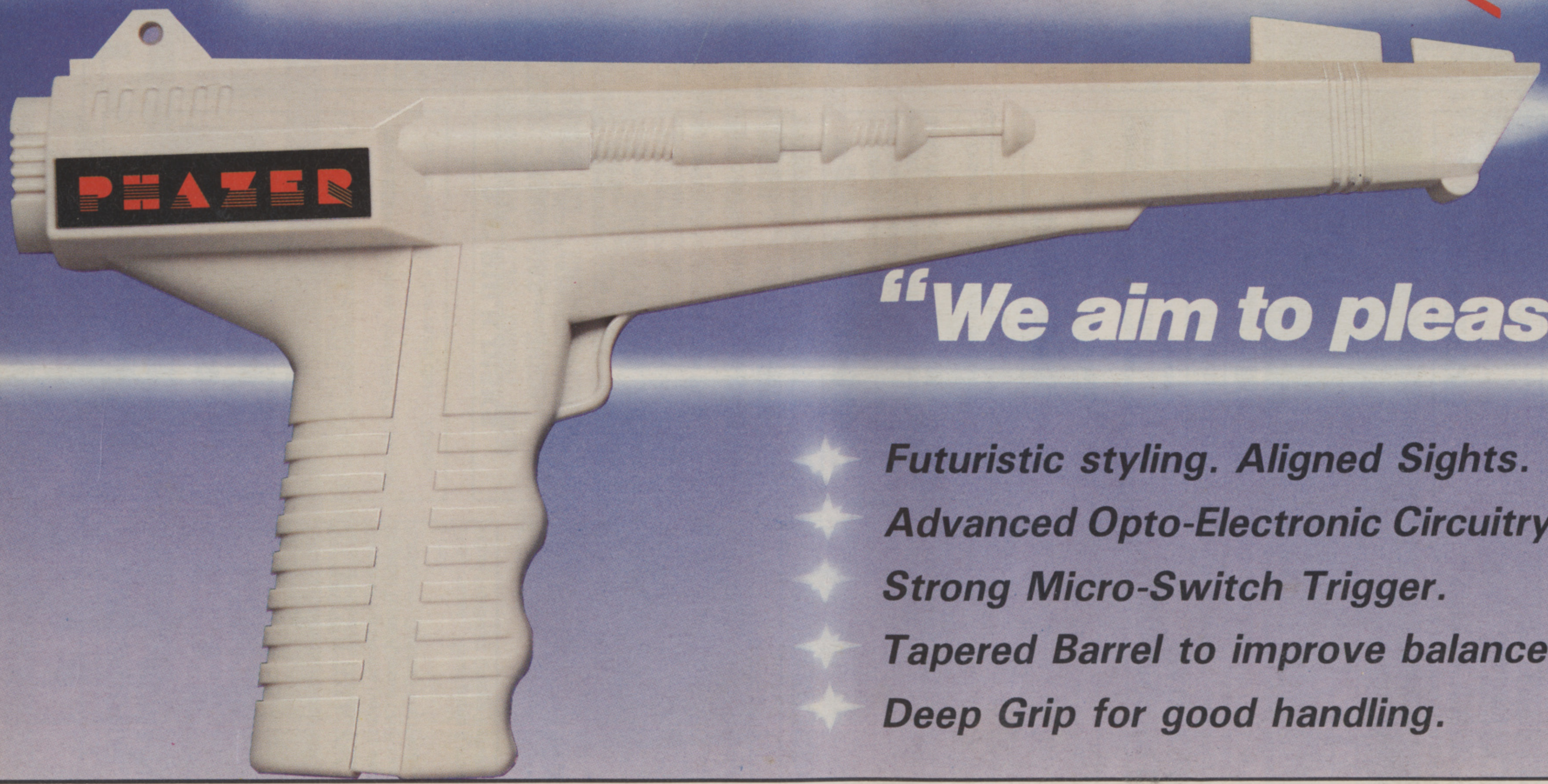

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